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Title:
Perfect score:
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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  Issued_Patents_AA:*
1: /cgn2_6/ptodata/2/
2: /cgn2_6/ptodata/2/
3: /cgn2_6/ptodata/2/
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Listing first 45 summaries
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US-08-499-215-5
US-09-357-251-37
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US-08-609-049A-12
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US-09-461-697-167
US-09-846-697-167
US-09-846-277-3
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US-09-848-810-25
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US-09-164-193-21
PCT-US93-12019-2
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PCT-US93-12019-2
US-08-985-526-3
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                                                                                                                                                                                                                                        Sequence 5, Appli
Sequence 37, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 28, Appl
Sequence 28, Appl
Sequence 16, Appl
Sequence 16, Appl
Sequence 3, Appli
Sequence 3, Appli
Sequence 2, Appli
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Sequence 3, Appli
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Sequence 1, Appli
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Query Matches  Agy 1  Db 75	RESULT 1 US-08-499-5 Sequence Patent NA GENERAL APPLIC APP	22 23 23 23 24 24 24 24 25 26 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28
ery Match 78.8%; Score 41; DB 1; Length 342; st Local Similarity 77.8%; Pred. No. 14; tches 7; Conservative 0; Mismatches 2; Indels 1 CISVPLVPC 9	1  499-215-5 ence 5, Application US/08499215 ent NO. 5612204 int NO. 5612204 pplicant INFORMATION: pplicant: Saeki, Hisashi pplicant: Miura, Akira ittle of INVENTION: BIOLOGICAL DEGRADATIVE TITLE OF INVENTION: TREATMENT OF CHLORINE-SUBSTITUTED TITLE OF INVENTION: TREATMENT OF CHLORINE-SUBSTITUTED TORRESPONDENCE ADDRESS: ADDRESSEE: Sughrue, Mion, Zinn, Macpeak & Seas STREET: 2100 Pennsylvania Avenue CITY: N.W. COUNTRY: U.S.A. ZIP: 20037-3202 COMPUTER READABLE FORM: MEDIUM TYPE: IBM PC Compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.30 SOFTWARE: Patentin Release #1.0, Version \$.1 CURRENT APPLICATION NUMBER: US/08/499,215 APPLICATION NUMBER: US/08/499,215 PILING DATE: 08-JUL-1994 FILING DATE: 08-JUL-1994 FORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS: SEQUENCE CHARACTERISTICS: LENGTH: 342 amino acids TYPE: anino acid TOPOLOGY: 11near MOLECULE TYPE: protein  MOLECULE TYPE: protein	31 59.6 496 4 US-09-171-969-2 31 59.6 597 6 5171850-2 31 59.6 604 3 US-08-635-137-2 31 59.6 604 4 US-09-136-981-2 31 59.6 604 4 US-09-136-981-2 31 59.6 871 4 US-09-28-5041-19 31 59.6 1837 3 US-09-28-918-5 30 57.7 39 4 US-09-28-318-5 30 57.7 144 6 5208218-1 30 57.7 382 1 US-08-318-947A-17 30 57.7 382 1 US-08-930-132 87.7 382 2 US-08-930-17 30 57.7 428 6 5268463-8 30 57.7 428 6 5432081-9 30 57.7 456 6 5432081-9 30 57.7 457 6 5268463-7 30 57.7 457 6 5268463-7 30 57.7 457 6 5268463-7 30 57.7 510 4 US-09-522-217-89
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Gaps		2, Appl1 8, 171850 8, 171850 8, 171850 8, 171850 12, Appl1 2, Appl1 5, Appl 132, Appl 132, Appl 17, Appl 182, Appl 183, Appl 184, Appl 189, Appl

RESULT 2 US-09-357-251-37

Sequence 37, Application US/09357251 Patent No. 6271441

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US-08-107-684B-11
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; ORGANISM: Homo sapiens
US-09-357-251-37
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APPLICANT: Famodu, Layo O.
APPLICANT: Famodu, Layo O.
APPLICANT: Famodu, Layo O.
APPLICANT: Schwaber, James S.
TITLE OF INVENTION: Plant Aminoacyl-trna Synthetase
FILE REFERENCE: BB-1193
CURRENT APPLICATION NUMBER: US/09/357,251
CURRENT FILING DATE: 1999-07-20
EARLIER APPLICATION NUMBER: 60/093,530
EARLIER APPLICATION NUMBER: 60/093,530
NUMBER OF SEQ ID NOS: 37
NUMBER OF SEQ ID NOS: 37
                                                         TELEFAX: (703) 836-2787
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
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SEQ ID NO 37
LENGTH: 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: BETTIGGE, William P.
REGISTRATION UMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28478
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentID Release #1.0, Version #1.25
APPLICATION NUMBER: US/08/107,684B
FILING DATE: 17-AUG-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
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                  TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: GAYRAL, Jean-Pierre
TITLE OF INVENTION: POLYPEPTIDES CONTAINING SEQUENCES
TITLE OF INVENTION: CHARACTERISTIC OF PYRROLIDONE CARBOXYLYL PEPTIDASES,
TITLE OF INVENTION: POLYNUCLEOTIDES CONTAINING A SEQUENCE CODING FOR SUCH
TITLE OF INVENTION: POLYPEPTIDES, AND THEIR USE, IN PARTICULAR FOR DIAGNOSTIC
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TOPOLOGY:
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P.O. Box 19928
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ROBERT-BAUDOUY, Jeannine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                               (703) 836-6400
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44.48;
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Sequence 28, Application US/08609049A
Patent No. 5948664
GENERAL INFORMATION:
                                                                                        US-08-609-049A-28
                                                                                                        RESULT
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Best Local Similarity
Marches 6; Conserva
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GENERAL INFORMATION:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/609,049A
FILING DATE: 29-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 23
                                                                                                                                                   848 CVSKPIVVC 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Williams, Lewis T.
APPLICANT: Molz, Lisa
APPLICANT: Chen, Yen-Wen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: NO. 5948664el PI 3-Kinase Polypeptides NUMBER OF SEQUENCES: 32
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                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
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ZIP: 94111-3834
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CITY: San Francisco
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Chen, Yen-Wen
                         Williams, Lewis T
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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55.6%;
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75.0%;
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Pred. No. 1e+03;
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                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                  Length 1876;
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, MOLECULE TYPE: protein US-08-609-049A-28
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CLASSIFICATION: 435
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B. 29,684
REGISTRATION NUMBER: 29,684
REGISTRATION NUMBER: 2307
REFERENCE/DOCKET NUMBER: 2307
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
TELEPHONE: 415-326-2400
TELEPAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 28:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-170-996-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12, Application US/09170996 Patent No. 6291220
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Matches 5; Conserv
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
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LENGTH: 1876 amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: Iwo ..... CITY: San Francisco
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                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: NO. NUMBER OF SEQUENCES: 32
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Williams, Lewis T.
APPLICANT: Molz, Lisa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        848 CVSKPIVVC 856
                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08 FILING DATE: 29-FEB-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/609,049
FILING DATE: 29-FEB-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
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                                                                                                                                                                                                                                                  COUNTRY:
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                                                                                           FILING DATE:
                                                                                                           APPLICATION NUMBER:
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Chen, Yen-Wen
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55.6%;
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Pred. No. 1e+03;
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; TOPOLOGY: linear; MOLECULE TYPE: protein US-09-170-996-12
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                                                            ; MOLECULE TYPE:
US-09-170-996-28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 12:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 23
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
Query Match
Best Local Similarity
                                                                                                                         TELEFAX: 415-326-2422
INFORMATION FOR SEG ID NO: 28:
SEQUENCE CHARACTERISTICS:
LENGTH: 1876 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Williams, Lew APPLICANT: Molz, Lisa APPLICANT: Chen, Yen-Wen APPLICANT: NO
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ADDRESSEE: Townsend and Townsend and Crew LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: No. 6291220el PI 3-Kinase Polypeptides NUMBER OF SEQUENCES: 32
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                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          848 CVSKPIVVC 856
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CURRENT APPLICATION DATA:
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STRANDEDNESS: sir
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                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 29-FEB-1996
                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                       ATTORNEY AGENT INFORMATION:
NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity nes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: San Francisco
STATE: California
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                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/170,996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                           TYPE:
                                                                                              TOPOLOGY:
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6291220
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                                                                                               linear
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55.6%;
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      65.4%;
55.6%;
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                                                                                                                                                                                                                                           29,684
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Pred. No. 1e+03;
     Score 34; DB 4; Length 1876; pred. No. 1e+03;
                                                                                                                                                                                                                              2307K-063700US
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Matches

Conservative

Mismatches

0

Gaps

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; ORGANISM: Homo sapiens US-09-461-697-167
                                                                                                                                             APPLICANT: POTTBUY, STATE D.

APPLICANT: PUTANAM, KASTUTÍ
APPLICANT: RATZ, LAWTENCE C.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING
TITLE OF INVENTION: AND TREATING CONDITIONS, DISORDERS, OR DISEASES INVOLVING
FILE REFERENCE: 10001-005-999
CURRENT APPLICATION NUMBER: US/09/461,697
NUMBER OF SEQ ID NOS: 466
SEQ ID NO 167
LENGTH: 32
TYPER: NEMERIES FASTSEQ for Windows Version 4.0
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                                                     Query Match
                      Matches
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APPLICANT: COGENT NEUROSCIENCE, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 167, Application US/09461697 Patent No. 6277974
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NUMBER OF SEQ ID NOS: 466
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 169
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                        TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Barney, Shawn
APPLICANT: Thomas, Mary Beth
APPLICANT: Portbury, Stuart D.
APPLICANT: Puranam, Kasturi
APPLICANT: Katz, Lawrence C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING TITLE OF INVENTION: AND TREATING CONDITIONS, DISORDERS, OR DISEASES INVOLVING FILE REFERENCE: 10001-005-999 CURRENT APPLICATION NUMBER: US/09/461,697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 169, Application US/09461697 Patent No. 6277974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: COGENT NEUROSCIENCE, Inc. APPLICANT: Lo, Donald C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                   Local Similarity
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les 5; Conserv
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Thomas, Mary Beth
                                                                                                                                                                                                                                                                                                                                                                                                   Lo, Donald C
               Conservative
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                            63.5%; Score 33; DB 55.6%; Pred. No. 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55.6%;
          Mismatches
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Pred. No. 15;
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                                     DB 4; Length 32;
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       Indels
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Gaps
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Sequence 3, Application US/08466277
Patent No. 6190666
GENERAL INFORMATION:
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Best Local Similarity
Thes 5; Conserve
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US-07-920-281C-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 703-241-2848
TELEX: 248345
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1253 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Murphy Jr., Gerald M.
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 828-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-241-1300
TELEPAX: 703-241-2848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/07920281C Patent No. 5739026
                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                              285 CFQPPCVPC 293
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Garoff, Henrik
APPLICANT: Liljestrom, Peter
TITLE OF INVENTION: DNA Expressic
TITLE OF INVENTION: Alphaviruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                            1 CISVPLVPC 9
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                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Birch, St.
STREET: P.O. Box 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 13-AUGCLASSIFICATION: 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                           TITLE OF INVENTION: DNA Expression Systems Based on
                                                                                                                                 APPLICANT: Garoff, Henrik
Liljestrom, Peter
                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: P.O. BOX 7. CITY: Falls Church STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16 CSSIPMVLC 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CISVPLVPC 9
        STREET: P.O. Box 70
CITY: Falls Church
STATE: Virginia
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22040-0747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Virginia
                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Birch, Stewart, Kolasch & Birch
O. Box 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-AUG-1992
)N: 435
                                                                                                                                                                                                                                                                                                                                                       63.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Expression Systems Based on
                                                                                                     Alphaviruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/07/920,281C
                                                Stewart, Kolasch & Birch
                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                 Score 33; DB 1;
Pred. No. 9.8e+02;
                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 1253;
                                                                                                                                                                                                                                                                                                                                0
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22040-0747

0

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TOPOLOGY: linear

MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-08-466-277-3
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INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
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ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 40399/182 NIHD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)672-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285 CFOPPCVPC 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Foley & Lardner STREET: 3000 K Street, N.W., Suite 500 CITY: Washington, D.C.
                                                                                                                                                                                                                                                      APPLICATION NUMBER: US FILING DATE: 19921214 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Murphy Jr., Gerald M.
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 828-103P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-241-1300
TELEPHONE: 703-241-2848
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FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
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LENGTH: 1253 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20007-5109
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FILING DATE: 06-Jun-1995
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/07988273
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AARONSON, Stuart A. BOTTARO, Donald P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ISHIBASHI, Toshio
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55.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EXPRESSION CLONING OF A HUMAN
                                                                                                                                                                                                                                                                                                                                                US/07/988,273
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; MOLECULE TYPE: protein US-07-988-273-2
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                                                                                                                                      US-08-848-810-25
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TELEX: 904136
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 185 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Deibel
APPLICANT: Yem, A
APPLICANT: Wilson
                                                              Matches
                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/848,810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 49001
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Wilson, C. L.
TITLE OF INVENTION: Catalytic Macro Molecules Having DCD25B
TITLE OF INVENTION: Like Activity
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                       NAME: Wootton, Thomas A. REGISTRATION NUMBER: 35,004 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                    MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                        ANTI-SENSE:
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                                                                                                                                                                                                    TOPOLOGY: linear
                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: si
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22 CYSLPSQPC 30
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                               1 CISVPLVPC 9
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AMINO ACID
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                                                                                                                                                                                                                                                  185 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Deibel Jr., M. R.
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                                                              Conservative
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                                                                                                                                                                                                                   single
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55.6%;
                                                                             61.5%;
55.6%;
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    Mismatches

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pred. No. 2.1e+02;

    Mismatches

                                                                                Score 32; DB 3;
Pred. No. 2.1e+02;
                                                                                               DB 3; Length 185;
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                                                                   Gaps
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Search completed: June 17, 2002, 15:56:40 Job time: 89 sec
                                                                                                                                             Query Match
Best Local Similarity
"atches 5; Conserva
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Patent NO. 6238582
PATENT L INFORMATION:
APPLICANT: ACCON, SUSAN L.
TITLE OF INVENTION: NOVEL CSAPTP NUCLEIC ACID MOLECULES AND USES THEREFOR (as amended CURRENT APPLICATION NUMBER: US/09/164,193C
CURRENT APPLICATION NUMBER: US/09/164,193C
CURRENT FILING DATE: 1998-09-30
NUMBER OF SEQ ID NOS: 23
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 21
LENGTH: 185
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                            PCT-US93-12019-2
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA Release #1.0, Version #1.25
APPLICATION NUMBER: PCT/US93/12019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application PC/TUS9312019 GENERAL INFORMATION:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 61.
Best Local Similarity 55.
Matches 5; Conservative
                                                                                                                                                                                                                                                                                                                              PILING DATE:
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 07/988,273
FILING DATE: 14-DEC-1992
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 185 amino acids
                                                                                                                                                                                                                                                                       LENGTH: 185 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                        22 CYSLPSQPC 30
                                                                                                                            1 CISVPLVPC 9
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                                                                                                                                                             Conservative
                                                                                                                                                     61.5%; Score 32; DB 5; Length 185; 55.6%; Pred. No. 2.1e+02; tive 1; Mismatches 3; Indels
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Pred. No. 2.1e+02;
1; Mismatches 3
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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
    Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
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    Match
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46
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Copyright (c) 1993 - 2000 Compugen Ltd
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                                                        DB
VEGA_CAVPO
VEGA_MOUSE
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PKSL_BACSU
CPJ1_RABIT
CPJ6_MOUSE
CPJ3_RAT
RBB2_HUMAN
VEGA_MOUSE
VEGA_MOUSE
RN27_HUMAN
VEGA_HUMAN
VEGA_HORSE
RN27_HUMAN
VEGA_HORSE
RN27_HUMAN
VEGA_HORSE
RN27_HORSE
RN2P_MAIZE
MDHP_MSORBI
MDHP_MSORBI
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                                                                                                                                                                                                                                 043915 homo sapien
035251 rattus norv
p52584 orf virus (
p50412 ovis aries
p26617 cavia porce
p15691 bas inusculu
005634 strongyloce
005470 bacillus su
p52786 oryctolagus
054750 mus musculu
p51590 rattus norv
p29375 homo sapien
000731 mus musculu
p16612 rattus norv
095328 equus cabal
099pj2 mus musculu
p0799j2 mus musculu
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P15692
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P17606
P17719
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5 homo sapien
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PROCESSING, AND SEQUENCY MEDLINE-20011413; PubMer Stacker S.A., Stervers I Nice E.C., Roufail S.; Alitalo K., Achen M.G.; "Biosynthesis of vascul- proteolytic processing J. Biol. Chem. 274:3212 -i- FUNCTION: Growth far and endothelial cel migration and also vessels. May functi- vascular systems du of differentiated I activates VEGFR-2 ( -i- SUBUNIT: Homodimer;	Genomics 4 [3] SEQUENCE F MEDLINE=98 Achen M.G. Alitalo K. "Vascular tyrosine k Proc. Natl	Genomics [2] SEQUENCE TISSUE-LL MEDLINE-C ROCCHIGIA ROSSI E., "Human FI	(1) SEQUENCE FROM N.A TISSUE-Lung; MEDLINE-97349118; Yamada Y., Nezu J "Molecular clonin" "Molecular clonin" "Degr-D.";	01-MAR-2002 01-MAR-2002 01-MAR-2002 Vascular endo growth facto) FIGF OR VEGFI Homo sapiens Eukaryota; Mu Mammalia; Eu	ULT 1 D_HUMAN VEGD_F	4444 3355 444 444 444 444 444 444 444 44
ESSING, AND SEQUENCE OF 89-94; INE-20011413; PubMed-10542248; ker S.A., Stenvers K.L., Caesar E.C., Rouffail S., Simpson R.J., alo K., Achen M.G.; ssynthesis of vascular endotheli ceolytic processing which genera 31.01. Chem. 274:32127-32136(1999 FUNCTION: Growth factor active and endothelial cell growth, st migration and also has effects vessels. May function in the fo vascular systems during embryog of differentiated lymphatic end activates VEGFR-2 (Fikl) and VE SUBUNIT: Homodimer; non-covalen	ics 47:207-216(199) ics 47:207-216(199) NCE FROM N.A. NE-98118549; PubMee M.G., Jeltsch M., Jeltsch M., Jeltsch E., M.G., Stacker S.A. ular endothelial gaine kinases VEGF r. Natl. Acad. Sci.	Genomics 42:483-4 [2] SEQUENCE FROM N.A SEQUELUNG: MISSUE-LUNG: MEDLLINE-99140120; ROCCHIGHAN M., L ROSSI E., Ballabi "Human FIGF: Clon	NCE FR NE=Lung NE=973 NE=973 Na Y., Cular	200 200 200 200 fac fac VE pie pie pie sta;	L HUMAN	333333333333333333333333333333333333333
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PubMed=10542248; envers K.L., Cassar C., Villi S., Simpson R.J., Moriti I.S., Simpson R.J., Moriti M.G.; vascular endothelial growinessing which generates non- 74:32127-32136(1999). 74:32127-32136(1	the PIGA and the G \$ 47:207-216(1998). § FROM N.A. 98118549; PubMed=9 G., Jeltsch M., Ku K., Stacker S.A.; ar endothelial grow kinases VEGF rece atl. Acad. Sci. U.S	8(1997).  PubMed-947949 stingi M., Lu stingi, Zuffardi A., Zuffardi	o a ' 🕱	. 41, Create 41, Last s 41, Last a lial growth FIGF). man). man). ia; Primates	)ARD;	82 171 218 231 231 251 304 353 353 393 393 740 740 741
CCE OF 8 sed=1056 K.L., Simpso ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	yed=94352; Med=94352; Nukk E ., Kukk E .A.; growth fareceptor . U.S.A.;	±94: M. uffi	d=92051 Shimane novel	eate st s wth wth data		
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                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                          leavage
                                                                                     1 CNEESLIC 8
                         N
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PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity towar vegeta and vegeta. Vegeta form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed Vegeta is composed mostly of two Vegeta homology domains (VHDs) bound by non-covalent interactions.

SIMILARITY: BELONGS TO THE PDGETVEGET FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L; V12863; CAA73370.1; ...; Y12864; CAA73370.1; ...; Y12864; CAA73371.1; ...; Y12865; CAA73371.1; JOINED. L; Y12865; CAA73371.1; JOINED. L; Y12867; CAA73371.1; JOINED. L; Y12866; CAA73371.1; JOINED. L; Y12866; CAA73371.1; JOINED. L; Y12869; CAA73371.1; JOINED. L; Y12870; CAA73371.1; JOINED. L; Y12870; CAA73371.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELULIAR LOCATION: Secreted.
TISSUE SPECIFICITY: Highly expressed in lung, heart, small intestine and fettal lung, and at lower levels in skeletal n colon, and pancreas.
                                                             CNEESLIC 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P15692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AJ000185; CAA03942
                                                                                                              8
                                                                                                                        Similarity
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PS50278; PDGF_2; 1.
Growth factor; Glycoprotein; Signal; on pair of basic residues; Multigene
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IPR000072;
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258
277
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llarity 100.0%;
Conservative (
 STANDARD;
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1145
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X(1,3)-C.
1 (APPROXIMATE).
2.
                                                                                                                                                                  N-LINKED (GLCNAC. . .) (PÓTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
2048D769D735173E CRC64;
                                                                                                                                                                                                                   POTENTIAL.
OR 99 (IN 1
VASCULAR EI
                                                                                                                     Score 46; DB 1
Pred. No. 0.07;
PRT;
                                                                                                           Mismatches
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326
                                                                                                                                                                                                                                                                                                                                                                 ENDOTHELIAL GROWTH FACTOR D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (See http://www.isb-sib.ch/announce/
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RA Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.

RI Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.

C -!- FUNCTION: Growth factor active in anglogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and constraint and endothelial cell growth, stimulating their proliferation and gration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and confidence of the constraint of the venous and lymphatic endothelium in adults. Binds and confidence of the constraint of the venous and lymphatic endothelium in adults. Binds and confidence of the covalent and antiparallel (By similarity).

C -!- SUBBUNIT: Homodimer; non-covalent and antiparallel homodimer of the covalent and antiparallel homodimer of the covalent and the processed secreted forms with increased activity toward linked by disulfide bonds before secretion. The fully processed screen and the processed secretion of two VEGF homology domains (VHDs) behand by non-covalent interactions (Nu eminiarity).
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01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF).
FIGF OR VEGFD.
     SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF014827; AAB66557.1;
HSSP; P15692; LVPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-Sprague-Dawley;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bound by non-covalent interactions (By similarity). SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                 SM00141; PDGF; 1
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PS50278; PDGF_2; 1.
Growth factor; Glyco
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1147
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93
210
326
317
   37112 MW;
                                                                                                                                                                                                                                                                                                                                          Glycoprotein; Signal; Repeat;
                                                                                                                                                                                                                                                                                                                            residues; Multigene family
INTRACHAIN (BY SIMILARITY).

INTRACHAIN (BY SIMILARITY).

INTRACHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).
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4 X 16 AA REPEATS
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                                                                                                                                                                                                                                                                                                            POTENTIAL.
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                                                                                                                                                                                                          (APPROXIMATE).
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Query Match

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P52584;
D1-OCT-1996 (Rel. 34, Created)
O1-OCT-1996 (Rel. 34, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Vascular endothelial growth factor homolog precursor.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Orf virus (strain NZ2) (OV NZ-2)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE-94076465; PubMed=8254780;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -i- FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.
-i- SUBUNIT: HOMODIMER; DISULFIDE-LINKED (BY SIMILARITY).
-i- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Virol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         poxvirus orf virus."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lyttle D.J., Fraser k.M., Fleming S.B., Mercer A.A., Robinson A.J., "Homologs of vascular endothelial growth factor are encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10259;
                                                                                                                                                                             DISULFID
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                               EMBL; S67520; AAB29220.2; ...
HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 75.0 hes 6; Conservative
                                                                                                                                                                                                                                                                                                                   PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00341;
                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                          Mitogen;
                                                                                                                                                                                                                                                                                                                                                  SMART; SM00141; PDGF; 1
                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CNEESLIC 8
                                                                                                             Local Similarity
mes 6; Conser
                                                               71 CNDESLEC 78
                                                                                      1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
                                                                                                                                                                                                                                                                                                                                                              PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                             Growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68:84-92(1994)
                                                                                                                                                                                 133 AA;
                                                                                                                  Conservative
                                                                                                                                                                                                                   36
67
61
                                                                                                                                                                                                                                                                                                                                                                            PDGF;
 STANDARD;
                                                                                                                                                                                            78
112
114
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70
85
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75.0%;
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                                                                                                                                                                               BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC. . .) (POTEN
M; 917C0F6883030C39 CRC64;
                                                                                                                               Score 36; DB Pred. No. 2.5;
                                                                                                                                                                                                                                                            BY SIMILARITY.
                                                                                                                                                                                                                                                                          HOMOLOG
                                                                                                                                                                                                                                                                                     VASCULAR ENDOTHELIAL GROWTH FACTOR
                                                                                                                                                                                                                                                                                                  POTENTIAL.
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                                                                                                                      Mismatches
     146
                                                                                                                                             DB 1; Length 133;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
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BD
                                           VEGA_CAVPO
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01-OCT-1996 (Rel. 34, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation between Bioinformatics Institute. There are no restrictions on its the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bovidae; Caprinae; Ovis.
NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEGF OR VEGFA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Redmer D.A., Dai Y., Li J
Reynolds L.P., Moor R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Characterization and expression of vascular endothelial growth factor (VEGF) in the ovine corpus luteum.";
J. Reprod. Fertil. 108:157-165(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=97117958; PubMed=8958842;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-Kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pfam; PF00341; PD4E; 1.
proDom; PD001629; PDGF; 1.
sMART; SM00141; PDGF; 1.
pROSITE; PS00249; PDGF_1; 1.
pROSITE; PS50278; PDGF_2; 1.
mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X89506; CAA61677.1; -. HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000072; Pfam; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Heparin-binding; Multigene family. SIGNAL 1 26 BY SIMILARITY.
VEGA_CAVPO P26617;
                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
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mes 6; Conserv
                                                                                                                                                       86 CNDESLEC 93
                                                                                                                                                                                                      1 CNEESLIC 8
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                                                                                                                                                                                                                                                                                                                                                                                      146 AA;
                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                STANDARD;
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93
127
129
129
76
85
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                                                                                                                                                                                                                                                                                                                                                                                           17247 MW;
                                                                                                                                                                                                                                                                                       78.3%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                       Score 36; DB 1;
Pred. No. 2.7;
                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC
                                                                                                                                                                                                                                                                                                                                                                                                                                       INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VASCULAR ENDOTHELIAL GROWTH FACTOR A.
                                                                                                                                                                                                                                                                                                                                                                                         4E792CB557F91760 CRC64
                                                                                                                                                                                                                                                                    Mismatches
                                        164 AA.
                                                                                                                                                                                                                                                                                                                  Length 146;
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                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
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AC COORDINATION NO COORDINATIO
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Best Local :
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DISULFID 25 67
DISULFID 56 101
DISULFID 60 103
DISULFID 50 50
        Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                     01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precurso
VEGF OR VEGFA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M84230; AAA37057.1; -. HSSP; P15692; 1VGH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      similarity).
-i- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (JAN-1992) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: Growth factor active in angiogenesis, and endothelial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A (VEGF-A) (Vascular permeability
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Bile duct;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CNEESLIC 8
                                                                                                                OR VEGFA.
                                                                                                                                                                                                                                                                                                                                                                                                                             CNDESLEC 67
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SUBCELLULAR LOCATION: Secreted but remains associated to cells or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to the extracellular matrix unless released by heparin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          permeability (By similarity).
SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell growth. Induces endothelial proliferation and vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19330 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  78.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /th factor; Glycoprotein.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC. . . ) (POTENWRF )
9EBB6AB1A9D5DCA4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 36; I
Pred. No. 3;
                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                        A precursor (VEGF-A) (Vascular
                                                                                                                                                                                                                                                                                         190 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .) (POTENTIAL).
                Bovoidea;
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SEQUENCE
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                                                                                                                                                                                                                                                              SIGNAL
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PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00341; PDGF; 1. ProDom; PD001629; PDGF; 1. SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                       Heparin-binding; Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR; A33255; A33255.
PIR; A33787; A33787.
PIR; B40080; B40080.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M32976; AAA30502.1; -. EMBL; M31836; AAA30804.1; -. EMBL; M33750; AAA30805.1; -.
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or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; P15692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ferrara N., Henzel W.J.;
"Pituitary follicular cells secrete a novel heparin-binding growth factor specific for vascular endothelial cells.";
Biochem. Biophys. Res. Commun. 161:851-858(1989),
-i- FUNCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    produced by alternative splicing.
-!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tischer E., Gospodarowicz D., Mitchell R., Silva M., Schilling J., Lau K., Crisp T., Fiddes J.C., Abraham J.A.; "Vascular endothelial growth factor: a new member of the platelet-derived growth factor gene family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 27-31.
MEDLINE-89286596; PubMed-2735925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Blochem. Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A., AND SEQUENCE OF 27-47.
MEDLINE=90069608; PubMed=2479986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=90121225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 27-190 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Science 246:1306-1309(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Leung D.W., Cachianes G., Kuang W.-J., Goeddel D.V., Ferrara "Vascular endothelial growth factor is a secreted angiogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bovidae; Bovinae;
NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALTERNATIVE PRODUCTS: 2 isoforms; alpha (shown here) and beta; are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted but remains associated to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFRI/Flt-1 and VEGFR2/Kdr receptors and to heparan sulfate and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              to the extracellular matrix unless released by heparin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         with PIGF (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              heparin (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR000072; PDGF.
                AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Res.
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PubMed=2610687;
darnutca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bos.
             22310 MW;
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                                                                                                                                                               BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GICNAC...) (PO)
MISSING (IN ISOFORM BETA).
R -> K (IN ISOFORM BETA).
EDBF903E46E24789 CRC64;
                                                                                                    INTERCHAIN (BY SIMILARITY)
INTERCHAIN (BY SIMILARITY)
                                                                                                                                                                                                                                                                                            splicing; Multigene family
                                                                                                                                                                                                                                    VASCULAR ENDOTHELIAL GROWTH FACTOR A.
                                                                                                                                   SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Usage
                                                                           (POTENTIAL).
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2002 (Rel. 41, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse)
Eukaryota; Metazoa; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           growth factor) (FIGF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VEGD_MOUSE P97946;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           orlandini M., Marconcini L., Ferruzzi R., Oliviero S.; "Identification of a c-fos-induced gene that is related to the platelet-derived growth factor/vascular endothelial growth factor."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FIGF OR VEGFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/6J; TISSUE=Fibroblast; MEDLINE=97030254; PubMed=8876195;
                                                                                                                                         Baldwin M.E., Catimel B., Nice E.C., Roufail S., Hall N.E., Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.; Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.; Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.; Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.; The specificity of receptor binding by vascular endothelial growth factor active in angiogenesis, lymphangiogenesis of the permeability of blood migration and also has effects on the permeability of blood migration and also has effects on the permeability of blood vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-3 (Flt4) receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
"Molecular cloning of a novel vascular endothelial growth factor,
vEGF-D.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-99288130; PubMed-9022638; Avantaggiato V., Orlandini M., Acampora D., Oliviero S., Simeone A.; Avantaggiato V., Orlandini M., Acampora D., Oliviero S., Simeone A.; "Embryonic expression pattern of the murine figf gene, a growth factor "Embryonic expression pattern of the murine figf gene, a growth factor belonging to platelet-derived growth factor/vascular endothelial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEVELOPMENTAL STAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genomics 42:483-488(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86 CNDESLEC 93
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                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=21276411; PubMed=11279005;
                                                                                                                                                                                                                                                                                                                                                                                                     RECEPTOR SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CNEESLIC 8
                                                                                        SUBUNIT: Homodimer; non-covalent and antiparallel.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Highly expressed in fetal and adult lung
              DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in several body structures and organs of the embryo such as limb buds, accustic ganglion, teeth, heart, anterior pituitary as well as lung and kidney mesenchyme, liver, derma, and periosteum of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Natl. Acad. Sci. U.S.A. 93:11675-11680(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed-9622638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78.3%;
75.0%;
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    Mismatches

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           growth factor
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RN OCCOSED DE DE LA CO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X99572; CAA67892.1; -.
EMBL; D89628; BAA14002.1; -.
HSSP; P15692; IVPP.
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CARBOHYD
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REPEAT
                                                                                                                 Q05634;
01-NOV-1997
30-MAY-2000
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                                                                                                                                                                                STRPU
                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                    Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinocea; Echinoida; Strongyloce
                                                                                      Fascin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INDUCTION: By the transcription factor c-fos.

PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward vEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions (By similarity).

SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                           Strongylocentrotus.
                                                                                                      16-OCT-2001
            NCBI_TaxID=7668;
                                                                                                                                                                                                                                         151 CNEEGVMC 158
                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                    1 CNEESLIC 8
                                                                                                                                                                STRPU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS00249; PDGF_1; 1.
PS50278; PDGF_2; 1.
Growth factor; Glycoprotein; Signal;
                                                                                                                                                                                                                                                                                                   Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                            358 AA;
                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                    (Rel. 35, Created)
(Rel. 39, Last sequence update)
(Rel. 40, Last annotation update)
                                                                                                                                                                   STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                40908 MW;
                                                                                                                                                                                                                                                                                                                   78.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    residues; Multigene
                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED
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Pred. No.
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INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
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                                                                                                                                                                        495
                                                                                                                                                                                                                                                                                                                                                                                            (GLCNAC...) (POTENTIAL).
(GLCNAC...) (POTENTIAL).
(GLCNAC...) (POTENTIAL).
                                                Echinoida; Strongylocentrotidae;
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                                                                                                                                                                                                                                                                                                                                      Length 358;
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RESULT
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Best Local
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Submitted (JUL-1994) to the EMBL/GenBank/DDBJ databases
                                                                     similar to polyketide synthases.";
Gene 130:65-71(1993).
                                                                                     MEDLINE-93345824; PubMed-8344529;
Scottl C., Piatti M., Cuzzoni A., Perani P., Tognoni A., Grandi G.,
Galizzi A., Albertini A.M.;
"A Bacillus subtilis large ORF coding for a polypeptide highly
                         Grandi G
                                                                                                                                                                                                                                                                                                                  PKSL_BACSU
Q05470;
                                  STRAIN-168 / PB1424;
                                          SEQUENCE OF 3619-4427 FROM N.A.
                                                                                                                                                          STRAIN-168
                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                               Bacillus subtilis.
Bactlus/Clostridium group;
Bacillus/Staphylococcus group; Bacillus.
                                                                                                                                                                                                                                                                  01-FEB-1995 (Rel. 31, Created)
01-FEB-1995 (Rel. 31, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation updat
                                                                                                                                                                                              NCBI_TaxID=1423;
                                                                                                                                                                                                                                              Putative polyketide synthase pksL (PKS).
PKSL OR PKSX OR PKSA OR OUTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Actin-binding.
INIT_MET 0
SEQUENCE 495 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; L12047; AAC37183.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              temperature-induced gelation of sea urchin egg e. J. Cell Biol. 71:704-714(1976).
-- FUNCTION: ACTS AS AN ACTIN BUNDLING PROTEIN.
-- SIMILARITY: BELONGS TO THE FASCIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                               108 CNGEELIC 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-77051438; PubMed-1033188;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Fascin, an echinoid actin-bundling protein, is a homolog of the Drosophila singed gene product.";
Proc. Natl. Acad. Sci. U.S.A. 90:9115-9119(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Actin polymerization and interaction with other proteins in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHARACTERIZATION.
MEDLINE=79091184; PubMed=731692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Separation and interaction of the major components of sea urchin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bryan J., Kane R.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=94022326; PubMed=8415664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                         1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mol. Biol. 125:207-224(1978).
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 6; Conserv
                                                                                                                                                         / PB1424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54813 MW; D3B0B5CC52C21593 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.1%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 35; DB
Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of sea urchin egg extracts.";
                                                                                                                                                                                                                                                                                                                         PRT; 4427 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; Length 495;
                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
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CPJ1_RABIT
                                                                                                                                                        RESULT
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                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                         Query Match
Mammalia; Eutheria; Lagomorpha; Leporidae;
                                             01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Cytochrome P450 2J1 (EC 1.14.14.1) (CYPIIJI) (P-450IB).
                Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; C
                                                                                                                                                                                                                                                                                                               BINDING
BINDING
SEQUENCE
                                                                                                                CPJ1_RABIT
P52786;
                                                                                                                                                                                           1205 CNEEGQVC 1212
                                                                                                                                                                                                                                                                                                                                                                 BINDING
                                                                                                                                                                                                                                                                                                                                                        BINDING
                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00012; PHOSPHOPANTE PROSITE; PS00606; B_KETOACYL_S PROSITE; PS50075; ACP_DOMAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; Z14098; CAA78479.1; -.
EMBL; U11039; AAA883145.1; -.
EMBL; Z35133; CAA84504.1; -.
EMBL; Z99113; CAB13602.1; -.
PIR; S25021; S25021.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00109; ketoacyl-synt; 4. Pfam; PF02801; ketoacyl-synt_C; 4. Pfam; PF00550; pp-binding; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phosphopantetheine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Transferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Subtilist; BG10698; pksl.
InterPro; IPR000794; Ketoacyl-synt.
InterPro; IPR003880; Phosphopant_attach.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                    1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: CONTAINS 5 ACYL CARRIER DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SECONDARY METABOLISM.
COFACTOR: CONTAINS 5 COVALENTLY BOUND PHOSPHOPANTETHEINES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: POTENTIALLY INVOLVED IN SOME INTERMEDIATE THE SYNTHESIS OF A POLYKETIDE MOLECULE WHICH MAY BE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P27796; 1PXT.
                                                                                                                                                                                                                                                 <u>ر</u>
                                                                                                                                                                                                                                                                                                                                                     2632
2823
3575
3854
4019
243
1723
2523
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1409
1687
1876
2491
                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acyltransferase;
                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                             A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PHOSPHOPANTETHEINE; 5.

B KETOACYL_SYNTHASE; 1.
       Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B_KETOACYL_SYNTHASE;
                                                                                                                                                                                                                                                      76.1%;
62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ansferase; Antibiotic biosynthesis; NADP;
Multifunctional enzyme; Repeat; Complete proteome.
280 ACYL CARRIER (ACP) 1.
259 BETA-KETOACYL SYNTHASE 1.
                                                                                                                                                                                                                                                                                                             493398 MW;
                                                                                                                                                                                                                                                                                                                                                                ACYL CARRIER (ACP) 2.
BETA-KETOACYL SYNTHASE 2.
ACYL CARRIER (ACP) 3.
ACYL CARRIER (ACP) 4.
BETA-KETOACYL SYNTHASE 3.
BETA-KETOACYL SYNTHASE 3.
BETA-KETOACYL SYNTHASE 2.
ACYL CARRIER (ACP) 5.
BETA-KETOACYL SYNTHASE 4.
PHOSPHOPANTETHEINE (POTENTIAL).
                                                                                                                                                                                                                                    Score 35; DB 1; L. Pred. No. 1.1e+02; Yiematches 2;
                                                                                                                                                                                                                                                                                                   PHOSPHOPANTETHEINE (POTENTI)
PHOSPHOPANTETHEINE (POTENTI)
PHOSPHOPANTETHEINE (POTENTI)
PHOSPHOPANTETHEINE (POTENTI)
M; 9612521E561AB9F2 CRC64;
                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                            PHOSPHOPANTETHEINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BETA-KETOACYL REDUCTASE 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEHYDRATASE
                                                                                                                     500 AA
 Oryctolagus
                                                                                                                                                                                                                                                               Length 4427;
                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                        Indels
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INVOLVED IN
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                                                                                                                                                                                                                                  Gaps
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Вp
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 CPJ6_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.

MEDLINE-92011499; PubMed=1717443;

Kikuta Y., Sogawa K., Haniu M., Kinosaki M., Kusunose E., Nojima Y.,

Yamamoto S., Ichihara K., Kusunose M., Fujii-Kuriyama Y.;

Yamamoto S., Ichihara K., Kusunose M., Fujii-Kuriyama Y.;

Tanovel Species of cytochrome p-450 (p-450ib) specific for the small intestine of rabbits. cDNA cloning and its expression in COS cells.";

J. Biol. Chem. 266:17821-17825(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- CATALYTIC ACTIVITY: RH + reduced flavoprotein + O(2) = ROH +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Biol. Chem. 266:17821-17825(1991).
-:- FUNCTION: CATALYZES THE N-DEMETHYLATION OF BENZPHETAMINE TO
                                                                                                                                                                                                                                                                                                                                                        CPJ6_MOUSE
054750;
15-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; D90405; BAA14401.1; -. HSSP; P00179; 1DT6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -i- TISSUE SPECIFICITY: SMALL INTESTINE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00067; p450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oxidoreductase; Monooxygenase; Electron transport; Membrane; Heme; Microsome; Endoplasmic reticulum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00086; CYTOCHROME_P450; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                     15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Cytochrome P450 2J6 (EC 1.14.14.1) (CYPIIJ6) (Arachidonic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BINDING
            Genomics 49:152-155(1998).

-!- CATALYTIC ACTIVITY: RH + reduced flavoprotein + O(2) = oxidized flavoprotein + H(2)O.

-!- SUBCELLULAR LOCATION: Membrane-bound. Endoplasmic retice
                                                                                                                                                                                                                       Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-C57BL/6 X CBA; TISSUE-Liver;
MEDLINE-98234557; PubMed-9570962;
                                                                                                                                                                                                                                                                                          epoxygenase).
                                                                                   mouse chromosome 4.";
                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             296 NEENLIC 302
                                                                                               Ma J., Ramachandran S., Fiedorek F.T. Jr., Zeldin D.C.;
Mapping of the CYP2J cytochrome P450 genes to human chromosome 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 NEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oxidized flavoprotein + H(2)0. subcellular LOCATION: Membrane-bound. Endoplasmic reticulum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FORMALDEHYDE
SIMILARITY: BELONGS TO THE CYTOCHROME P450 FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PR00385; P450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR001128; Cyt_P450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     500 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57194 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73.9%;
85.7%;

    Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 34; DB
Pred. No. 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HEME (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A0EEE628E5FF23DE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                   501 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Length 500;
                         Endoplasmic reticulum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
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RESULT 12
CPJ3_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation. The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGD; MGI:1270148; Cyp2j6.
InterPro; IPR001128; Cyt_P450.
Pfam; PF00067; P450; 1.
PRINTS; PR00385; P450.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oxidoreductase; Monooxygenase; Electron transport; Membrane; Heme; Microsome; Endoplasmic reticulum.
BINDING 447 447 HEME (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00385; P450.
PROSITE; PS00086; CYTOCHROME_P450; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; U62295; AAB87636.1; -.
                                                                                                                                                                                                                                                                                                 MEDLINE-97284730; pubMed-9139707;

MEDLINE-97284730; pubMed-9139707;

Wu S., Chen W., Murphy E., Gabel S., Tomer K.B., Foley J.,

Wu S., Chen W., Murphy E., Gabel S., Zeldin D.C.;

Steenbergen C., Falck J.R., Moomaw C.R., Zeldin D.C.;

Steenbergen C., Falck J.R., Moomaw C.R., Zeldin D.C.;

"Molecular cloning, expression, and functional significance of a

"Molecular cloning, expression, and functional significance of a

cytochrome p450 highly expressed in rat heart myocytes.";

J. Biol. Chem. 272:12551-12559(1997).

J. Biol. Chem. 272:12551-12559(1997).

T. FUNCTION: THIS ENZYME METABOLIZES ARACHIDONIC ACID PREDOMINANTLY

VIA A NADPH-DEPENDENT OLEFIN EPOXIDATION MAINLY TO 14,15-, 11,12-,

AND B.9-EPOXYEICOSATRIENOIC ACIDS (EET). IT ALSO ACTS AS AN OMEGA-

1-HYDROXYEICOSATETRAENOIC ACID (19-0H-AA).

HYDROXYEICOSATETRAENOIC ACID (19-0H-AA).

-I-- CATALYTIC ACTIVITY: RH + reduced flavoprotein + O(2) = ROH +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CPJ3_RAT STANDARD; PRT; 502 AA. p51590; 01-OCT-1996 (Rel. 34, Created) 01-OCT-1996 (Rel. 34, Last sequence update) 30-MAY-2000 (Rel. 39, Last annotation update) Cytochrome P450 2J3 (EC 1.14.14.1) (CYPIIJ3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-FISCHER 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10116;
                                                       the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            296 NEENLIC 302
                                         or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity tes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 NEESLIC 8
                                                                                                                                                                                                            SIMILARITY: BELONGS TO THE CYTOCHROME P450 FAMILY
                                                                                                                                                                                                                                          oxidized flavoprotein + H(2)0.
SUBCELLULAR LOCATION: Membrane-bound. Endoplasmic reticulum.
TISSUE SPECIFICITY: ABUNDANTLY EXPRESSED IN HEART AND LIVER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P00179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         501 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57820 MW; 4E5A26B35D831E37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Euteleostomi;
Rodentia; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73.9%;
85.7%;

    Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           502 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
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EMBL; U39943; AAB48545.1;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                      or send an email to license@isb-sib.ch).
                          InterPro;
                                                                                      MIM; 180202;
                                                                                                                                                                                                                                                                                                Defeo-Jones D., Huang P.S., Jones R.E., Haskell K.M., Vuocolo G.A., Hanobik M.G., Huber H.E., Oliff A., "Cloning of cDNAs for cellular proteins that bind to the retinoblastoma gene product.";

Nature 352:251-254(1991)

1- FUNCTION: INTERACTS WITH THE VIRAL PROTEIN-BINDING DOMAIN OF THE COMMENTARY OF THE PROTEIN STORMAN PROTEIN.
                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

MEDLINE-94020841; Pubmed-8414517;
Fattaey A.R., Helin K., Dembski M.S., Dyson N., Harlow E.,
Vuocolo G.A., Hanobik M.G., Haskell K.M., Oliff A., Defeo-Jones D.,
                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-91312450;
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1102-1569 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oncogene 8:3149-3156(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RBB2_HUMAN STANDARD; PRT; 1722 AA P29375; Ol-DEC-1992 (Rel. 24, Created) Ol-OCT-1996 (Rel. 34, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Characterization of the retinoblastoma binding proteins RBP1 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Retinoblastoma-binding protein RBBP2 OR RBP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00385; P450.

PROSITE; PS00086; CYTOCHROME_P450; 1.

Oxidoreductase; Monooxygenase; Electron transport; Membrane; Heme; Microsome; Endoplasmic reticulum; NADP.

BINDING 448 448 HEME (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00067; p450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   297 NEENLIC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP; P00179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
les 6; Conser
                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Nuclear (Potential).
SIMILARITY: TO THE C-TERMINAL DOMAIN OF THE XE169 PROTEIN AND
                                                                                                                                                                                                                                                                 THE JUMONJI PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 NEESLIC 8
                                                                                                S16954; S16954.
                                                                                                               S66431; AAB28544.1; -.
   | IPR001606; ARID.
| IPR003347; JmjC.
| IPR003349; JmjN.
| IPR0041965; PHD.
| IPR004198; zf-C5HC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  502 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1DT6
                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=1857421;
         zf-C5HC2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57969 MW; CCCOAE67977FFF31 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73.9%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 34; DB
Pred. No. 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 (RBBP-2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1722 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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RT Characterization of transcriptional and post-transcriptional RT regulatory sequences.";

RL J. Biol. Chem. 271:3877-3883(1996).

CC :-FUNCTION: Growth factor active in angiogenesis, vasculogenesis and cendothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and cendothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and cendothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and cell force induces permeabilization of blood vessels. It binds to the veception of proliferation of blood vessels. It binds to the veception in the proportion of blood vessels. It binds to the veception in the proportion of blood vessels. It binds to the veception in the proportion of blood vessels. It binds to the veception in the proportion of blood vessels. It binds to the veception of blood vessels. It binds to the vessels to be provided by blood to the vessels. It binds to the vessels to be provided by blood t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DR DR DR DR DR DR DR DR DR SQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF02373; jmjC; 1.
Pfam; PF02375; jmjN; 1.
Pfam; PF002375; pHD; 3.
Pfam; PF002928; zf-C5HC2; 1.
SMART; SM00501; BRIGHT; 1.
SMART; SM00545; JmjN; 1.
SMART; SM00249; PHD; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-96216498; PubMed-8632007,
Shima D.T., Kuroki M., Deutsch U., Ng Y., Adamis A.P., D'Amore P.A.;
"The mouse gene for vascular endothelial growth factor. Genomic structure, definition of the transcriptional unit, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claffey K.P., Wilkison W.O., Spiegelman B.M., "Vascular endothelial growth factor. Regulation differentiation and activated second messenger J. Biol. Chem. 267:16317-16322(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Breier G., Albrecht U., Sterrer S., Risau W.; "Expression of vascular endothelial growth factor during embryonic angiogenesis and endothelial cell differentiation."; Development 114:521-532(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-3 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=92355593; PubMed=1644816;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=92274860; PubMed=1592003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. (ISOFORMS VEGF-1; VEGF-2 AND VEGF-3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; vertebrata; Eutereost
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-APR-1993 (Rel. 25, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          permeability factor) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VEGF OR VEGFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VEGA_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT 1563 1:
SEQUENCE 1722 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trans-acting factor; Nuclear protein.
CONFLICT 1563 1566 MISSING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              692 CNPERLVC 699
splicing.
TISSUE SPECIFICITY: In developing embryos, expres
choroid plexus, paraventricular neuroepithelium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ISOFORM VEGF-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73.9%;
62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            195815 MW; 8CFF8A88AE69A652 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 34; DE
Pred. No. 70;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         214 AA
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                                                expressed mainly in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pathways.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2;
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Best Local
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VARSPLIC
VARSPLIC
VARSPLIC
CONFLICT
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DISULFID
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PROSITE; PS00249; PDGF_1; 1.

PROSITE; PS50278; PDGF_2; 1.

PROSITE; PS50278; PDGF_2; 1.

Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal; Mitogen; Angiogenesis; Growth factor; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; S37052; AAB22252.1; --
EMBL; S38083; AAB22253.1; --
EMBL; S38100; AAB22254.1; --
EMBL; M95200; AAA40547.1; --
EMBL; M95200; AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProDom; PD001629; PDGF; SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
                                                                                                                                     P16612; Q9QXG7; Q9QXG6; Q9JKX7;
01-AUG-1990 (Rel. 15, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A) (Vascular permeability factor) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGD; MGI:103178; Vegf.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR; A43351; A43351.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                    Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                    SEQUENCE FROM N.A.
                                                                                                                      Rattus norvegicus (Rat).
                    MEDLINE=90207249; PubMed=2320579;
                                                                     NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                 VEGA_RAT
                                                                                                                                                                                                                                                                                                                                                     86 CNDEALEC 93
                                                                                                                                                                                                                                                                                                                                                                                        1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               kidney glomeruli. Also found in bronchial epithelium, adrenal gland and in seminiferous tubules of testis. High expression of VEGF continues in kidney glomeruli and choroid plexus in adults. DOMAIN: VEGF-3 contains a basic insert which acts as a cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                retention signal.
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS
   G.,
                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA
                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NOT_ANNOTATED_CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26
214
93
127
129
76
85
100
140
140
164
208
                                    (ISOFORM VEGF-A164),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25283
                                                                                                                                                                                                                                                                                                                                                                                                                                         71.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W-LINKED (GLCNAC. . .) (PROBABLE).
K -> N (IN ISOFORM VEGF-1).
MISSING (IN ISOFORM VEGF-1).
MISSING (IN ISOFORM VEGF-2).
GE -> EP / IN DEFO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  splicing; Multigene family.
BY SIMILARITY.
VASCULAR ENDOTHELIAL GROWTH FACTOR
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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INTERCHAIN (BY SIMILARITY).
     D.D.,
                                                                                     Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B5540B51E4BB6E17 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ER
     Kwok
                                                                                                                                                                                                                                                                 214 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 214;
                                        AND SEQUENCE OF
   P.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                           1;
     Sullivan K.A.
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                         Euteleostomi;
                                                                                         Murinae; Rattus
                                        27-190
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HSSP; P15692; 1VPP.
InterPFO; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
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J. Biol. Chem. 270:7717-7723(1995).
-: FUNCTION: Growth factor active in angiogenesis, vasculogenesis are endothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFRI/Fit-1 and VEGFRZ/Kdr receptors and to heparan sulfate and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DiSalvo J., Bayne M.L., Conn G., Kwok P.W., Trivedi P.G., Soderman D.D., Palisi T.M., Sullivan K.A., Thomas K.A., "Purification and characterization of a naturally occurring vascular "Purification and characterization of a naturally occurring vascular".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Developmental expression of vascular endothelial (VEGF-A) splicing variants, VEGF-A188, VEGF-A164, masseter muscle.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Amino acid and cDNA sequences of a vascular endothelial cell mitogen that is homologous to platelet-derived growth factor."; proc. Natl. Acad. Sci. U.S.A. 87:2628-2633(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 27-40.
TISSUE=Glial tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Palisi T.M., Hope D.A., Thomas K.A.;
"Amino acid and cDNA sequences of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. (ISOFORMS VEGF-A188; VEGF-A164; VEGF-A144 AND
                                                                                                                                                                         Heparin-binding; Alternative SIGNAL 1 26
                                                                                                                                                                                                                                              PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M32167; AAA41211.1; EMBL; AF215725; AAF19211.1; EMBL; AF215726; AAF19212.1; EMBL; AF222779; AAF25958.1;
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HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE SPECIFICITY: Expressed in the pituitary, in brain, in particularly in supraoptic and paraventricular nuclei and the particularly in supraoptic and paraventricular nuclei and the choroid plexus. Also found abundantly in the corpus luteum of the ovary and in kidney glomeruli.
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin (By similarity).
ALTERNATIVE PRODUCTS: At least 4 isoforms; VEGF-A188 (shown here), VEGF-A164, VEGF-A144 and VEGF-A120; are produced by alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VEGF-A164 is more basic, has heparin-binding properties and, although a signicant proportion remains cell-associated, most is freely secreted. VEGF-A188 is very basic; it is cell-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  with PIGF (By similarity).
SUBCELLULAR LOCATION: VEGF-A120 is acidic and freely secreted.
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SUBUNIT: Homodimer; disulfide-linked.
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                          VASCULAR ENDOTHELIAL GROWTH FACTOR A. BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                                                                   Multigene family.
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INTERCHAIN (BY SIMILARITY)

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Database
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Listing first 45 summaries
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Perfect score:
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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13.090 Million cell updates/sec
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Copyright (c) 1993 - 2000 Comp
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## ALIGNMENTS

RESULT A39035

ribonuclease-related anti-tumor protein - northern leopard frog (fragment) C;Species: Rana pipiens (northern leopard frog) C;Date: 31-Uul-1991 #sequence\_revision 31-Uul-1991 #text\_change 30-Jun-1993 C;Accession: A39035 R;Ardelt, W.; Mikulski, S.M.; Shogen, K. J. Biol. Chem. 266, 245-251, 1991 J. Biol. Chem. 266, 245-251, 1991 A;Title: Amino acid sequence of an anti-tumor protein from Rana pipiens oocytes and A;Reference number: A39035; MUID:91093131 A;Accession: A39035

A;Status: preliminary A;Molecule type: protein A;Residues: 1-104 <ARD> C;Superfamily: pancreatic ribonuclease

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R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Blc; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.; Fsil D.; Jones, L.M.; Karst, U. Science 294, 849-852, 2001
A;Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitournam, A.;Authors: Kreft, J.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wel A;Title: Comparative genomics of Listeria species.
A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AC1574
                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Listeria innocua
C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 14-Dec-2001
C;Accession: AC1574
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A, Molecule type: DNA
A, Residues: 1-397 < GLA>
A, Residues: 1-397 < GLA>
A, Cross-references: GB:AL592022; PIDN:CAC96363.1; PID:g16413591; GSPDB:GN00178
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C; Superfamily: acetate kinase
                     A; Gene: AckA2
                                                      C; Genetics:
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    Mismatches

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Query Match

56.9%;

Score 41;

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A; Residues: 1-383 <GRA>
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                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein A231L - Chlorella virus PBCV-1 C;Species: Chlorella virus PBCV-1 C;Species: Chlorella virus PBCV-1 C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C;Accession: T17722 C;R;Graves, M.V.; Van Etten, J.L.
                                                                                                                                                                                                                                                                                     A; Experimental source:
                                                                                                                                                                                                                                                                                                      A; Cross-references:
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C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 14-Dec-2001
C;Accession: AH1220
R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.;
Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.; F
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C;Superfamily: acetate kinase
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A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AH1220
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   p;otein -
                                                                                                                                                              Conservative
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Caenorhabditis elegans
                                                                                                                                                                            55.6%;
46.2%;
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72.7%;
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Pred. No. 14;
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                                                                                                                                                                                           Length 383;
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Fsihi, H.
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A;Cross-references: GB:AE001437; PIDN:AAK80210.1; PID:q15025255; GSPDB:GN00168 A;Experimental source: Clostridium acetobutylicum ATCC824
                                                                                      A; Molecule type: DNA
A; Residues: 1-378 < KUR>
                                                                                                                                                    R:Nolling, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.S.; Zeng, Q.; Gibson, R.; Daly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R.
J. Bacteriol. 183, 4823-4830 Comparative Analysis of the Solvent-Producing Bacterium A; Reference number: A96900; MUID:21359325; PMID:21359325
                                                                                                                                                                                                                                                                                                                                                                                             RESULT
G97177
A; Gene: CAC2253
                                                                                                                                                                                                                                                                                             membrane-associated sensory histidine kinase-like ATPase [imported] - Clostridium C;Species: Clostridium acetobutylicum C;Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 14-Sep-2001 C;Accession: G97177
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein AT4901400 [imported] - Arabidopsis thaliana (C:Species: Arabidopsis thaliana (mouse-ear cress) C:Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 16-Feb-2001 C:Accession: C85018 R:anonymous, The European Union Arabidopsis Genome Sequencing Consortium, The Cold Nature 402, 769-777, 1999

A:Title: Sequence and analysis of chromosome 4 of the plant Arabidopsis thaliana.
                                                                                                                                 A; Status: preliminary
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A; Residues: 1-1117 <STO>
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A; Residues: 1-409 <SMI>
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C;Date: 07-Oct-1994 #sequence_revision 10-Nov-1995 #text_change 09-Sep-1997
C;Accession: S42384
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A;Accession: S42384
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Best Local Similarity 50...
""" hes 7; Conservative
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Best Local :
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nes 7; Conserv
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NAC2-like protein - Arabidopsis thaliana
N;Alternate names: protein T9C5.120
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 04-Feb-2000 #sequence_revision 04-Feb-2000 #text_change 04-Feb-2000
C;Accession: T46230
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A; Residues: 1-469 <RIE>
A; Cross-references: EMBL: AL132964
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C;Species: Buchnera sp.
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 23-Mar-2001
C;Accession: A84947
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A; Introns: 60/1; 153/3; 233/3; 332/3; 402/3
A; Note: T9C5.120
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A; Residues: 1-319 <STO>
A; Cross-references: GB:AP000398; GSPDB:GN00144
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RESULT
S53818
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                                                                                                                                                                                                                                       C; Superfamily: penicillin tolerance protein
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Best Local Similarity
7; Conserv
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Best Local (
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Local Similarity 63.6%;
                                                                       232 AELGKETGTF 241
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8; Conser
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Pred. No.
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MOl. Gen. Genet. 246, 387-396, 1995
A;Title: Cloning and expression of a Xenopus gene that prevents
A;Reference number: S53818; MUID:95157530
A;Accession: S53818
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C;Species: Xenopus laevis (African clawed frog)
C;Date: 15-Jul-1995 #sequence_revision 01-Sep-1995 #text_change 21-Jul-2000
C;Accession: S53818
C;Accession: S53818
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A;Residues: 1-421 <SUJ>
A;Cross-references: GB:U10185; NID:g595379; PIDN:AAA82179.1; PID:g595380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pectinesterase (EC 3.1.1.11) precursor - Erwinia chrysanthemi
N;Alternate names: pectin methylesterase
C;Species: Erwinia chrysanthemi
C;Species: Erwinia chrysanthemi
C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 20-Jun-2000
C;Accession: S70914; S70913
R;Sheychik, V.E.; Condemine, G.; Hugouvieux-Cotte-Pattat, N.; Robert-Baudouy,
R;Sheychik, V.E.; Condemine, G.; Hugouvieux-Cotte-Pattat, N.; Robert-Baudouy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:X84665; NID:g1212890; PIDN:CAA59151.1; PID:g1212891 R;Shevchik, V.E.; Condemine, G.; Hugouvieux-Cotte-Pattat, N.; Robert-Baudouy, J. Mol. Microbiol. 19, 455-466, 1996 Mol. Microbiol. 19, 455-466, 1996 A;Title: Characterization of pectin methylesterase B, an outer membrane lipoprotei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            submitted to the EMBL Data Library, February 1995
A;Description: Characterization of pectin methylesterase B, an outer membrane lipopa;Reference number: S70914
A;Accession: S70914
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protein kinase C (EC 2.7.1.-) pckl - fission yeast (Schizosaccharomyces pombe) N;Alternate names: pombe C-kinase 1
C;Species: Schizosaccharomyces pombe
C;Date: 10-Sep-1999 #sequence revision 10-2-2-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: DNA
A;Residues: 1-53;234-361 <SHA>
A;Cross-references: EMBL:X84665; NID:g1212890; PIDN:CAA59151.1
A;Experimental source: strain 3937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: $70913; MUID: 96228695
A; Accession: $70913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Superfamily: pectinesterase pems
C;Reywords: carboxylic ester hydrolase
F;1-21/Domain: signal sequence #status predicted SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Gene: pemB
A; Start codon: GTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-433 <SHE>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;22-433/Product: pectinesterase #status predicted <MAT>
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Best Local
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                                                                                                                                                                                                                                     192 CATKAGATINTTC 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 CSGSLGKTANT
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                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
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46.2%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                          Score 37; DB
Pred. No. 82;
                                                                                                                                                                                                                                                                                                                                                     Mismatches
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80;
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A; Neture: Pro-A; Map position: 1L
A; Introns: 767/2; 834/3; 897/3; 959/1
C; Ksuperfamily: yeast protein kinase C; protein binding; phosphotransferase; serine/threoning
E; 414-461/Domain: protein kinase C zinc-binding repeat homology <KZ1>
E; 441-30/Domain: protein kinase C zinc-binding repeat homology <KZ2>
E; 662-923/Domain: protein kinase homology <KIN>
E; 667-93/Region: protein kinase ATP-binding motif
                                                                                                                           A;Introns: 146/1; 234/1; 559/1; 952/2; 1019/3; 1155/1
C;Superfamily: yeast protein kinase C; protein kinase C zinc-binding repeat homology; pr
C;Keywords: ATP; phospholipid binding; phosphotransferase; serine/threonine-specific prd
F;459-506/Domain: protein kinase C zinc-binding repeat homology <KZN1>
F;527-576/Domain: protein kinase C zinc-binding repeat homology <KZN2>
                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:Y15839; NID:g2687848; PIDN:CAA75801.1; PID:g2687849
A;Experimental source: strain C2 (ATCC 48329)
                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-1174 <OES>
                                                                                                                                                                                                                                                                                                                                                                                                               A:Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: PKC1, encoding a protein kinase A;Reference number: 222303; MUID:98415124 A;Accession: T43051
                                                                                                                                                                                                                                                                           A;Gene: pkcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein kinase C (EC 2.7.1.-) PKC1 - fungus (Cochliobolus heterostrophus) C;Species: Cochliobolus heterostrophus, Bipolaris maydis C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEMS Microbiol. Lett. 165, 273-280, 1998
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R; Oeser, B.M.
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A; Residues: 1-26, 'AMVASTKNP', 36-137 <GRI>
A; Cross-references: EMBL: Z69730; PIDN: CAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A:Molecule type: DNA
A:Residues: 93-988 <DEV>
A:Residues: 93-988 <DEV>
A:Cross-references: EMBL:Z69795; PIDN:CAA93697.1; GSPDB:GN00066;
R:Grishchuk, K.; McIntosh, J.R.; Devlin, K.; Churcher, C.; Barrel submitted to the EMBL Data Library, February 1996
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A; Accession: T38203
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A;Reference number: S35362; MUID:93259141
A;Accession: S35362
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A; Residues: 1-988 < TOD>
                                                                            Query Match
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                     Local Similarity
les 7; Conserv
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                       Conservative
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                                          51.48;
46.78;
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66.7%;
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                                          Score 37; DB 2;
Pred. No. 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIDN:CAA93602.1; GSPDB:GN00066; SPDB:SPAC22H10.01c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           kinase C, and FAT1,
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               Mismatches
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                                                               Length 1174;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        encoding a fatty acid transporter
             Indels
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Barrell, B.G.; Rajandrea
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Walsh, S.V.
             2;
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             Gaps
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          1;
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                          R;Chee, M.S.; Bankier, A.T.; Beck, S.; Bohni, R.; M.; Barrell, B.G.
                                                                                                                                                                                                       RESULT
S09778
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                                                                            C; Accession: $09778
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A; Note:
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A; Accession: S77690
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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     Top. Microbiol.
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                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
Immunol. 154, 125-169, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                            51.4%;
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C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 08-Oct-1999
                                          hypothetical protein UL16 precursor - human cytcmegalovirus (strain AD169)
C;Species: human cytcmegalovirus, human herpesvirus 5
A;Note: host Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;376-392/Domain: transmembrane #status predicted <TM1>
F;469-485/Domain: transmembrane #status predicted <TM2>
F;469-485/Domain: transmembrane #status predicted <TM3>
F;496-512/Domain: transmembrane #status predicted <TM3>
F;606-622/Domain: transmembrane #status predicted <TM4>
F;710-916/Domain: ATP-binding cassette homology <ABC2>
F;727-734/Region: nucleotide-binding motif A (P-loop)
F;1042-1058/Domain: transmembrane #status predicted <TM6>
F;1177-1193/Domain: transmembrane #status predicted <TM6>
F;1177-1193/Domain: transmembrane #status predicted <TM7>
F;1269-1285/Domain: transmembrane #status predicted <TM7>
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C:Superfamily: unassigned ATP-binding cassette proteins;
C:Keywords: ATP- nucleotide binding; P-loop; transmembrar
F:45-263/Domain: ATP-binding cassette homology <ABC1>
F:62-69/Region: nucleotide-binding motif A (P-loop)
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A; Residues: 200-1294 <ALF>
A; Cross references: EMBL: 274817
A; Experimental Source: strain S288C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Note: this sequence has been revised in reference S77690 A;Note: this was assumed to be the complete sequence of protein YOL075c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-179, 'TTRTGVFLVVKRED' <ALW>
A; Cross-references: EMBL: Z74816
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A; Residues: 1-1294 <ALE>
A; Cross-references: EMBL: Z74816; MIPS: YOL075c
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A; Note: this sequence has been revi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C:Date: 21-Apr-1997 #sequence_revision 09-May-1997 #text_change 02-Mar-2001 C:Accession: 877690; 866767; 866768
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 probable membrane protein YOL075c - yeast (Saccharomyces cerevisiae) N; Alternate names: hypothetical protein Ol125; hypothetical protein Ol130; hypothet
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Pred. No. 2.
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C.M.; Cerny, R.; Horsnell,

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A;Title: Enalysis of the protein-coding content of the sequence of human cytomegalovirus A;Reference number: S09749; MUID:90269039
A;Rccession: S09778
A;Rccession: S09778
A;Rccession: S09778
A;Rctaus: nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-230 <CHE>
A;Cross-references: EMBL:X17403; NID:95951; PIDN:CAA35448.1; PID:959620
A;Note: this sequence was submitted to the EMBL Data Library, December 1989
C;Superfamily: human cytomegalovirus hypothetical protein UL16
C;Keywords: glycoprotein; transmembrane protein
F;1-25/Domain: signal sequence #status predicted <SIG>
F;189-206/Domain: signal sequence #status predicted <TMM>
F;189-206/Domain: transmembrane #status predicted <AMT>
F;35,41,68,84,95,101,132,145/Binding site: carbohydrate (Asn) (covalent) #status predicted specific to the status predicted <AMT>
Covalent) #status predicted <AMT>
Covalent) #status predicted <AMT>
F;35,41,68,84,95,101,132,145/Binding site: carbohydrate (Asn) (covalent) #status predicted specific speci
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Maximum DB seq length: 2000000000
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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PPNK_HALNI
BCA_STRVL
ESR2_MICUN
YK86_CAEEL
Y243_MYCPN
RP1_HUMAN
SCX2_CENSU
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p3747 buchnera ap
060858 homo sapien
047474 erwinia chr
p36582 schizosacch
042632 cochliobolu
008234 saccharomyc
p16757 human cytom
043709 homo sapien
053769 streptomyce
p57781 micropogoni
p33569 streptomyce
p57781 micropogoni
p34352 caenorhabdi
p34352 caenorhabdi
p75439 mycoplasma
p56715 homo sapien
p08900 centruroide
013547 saccharomyc
p47599 mycoplasma
p24082 escherichia
059749 rhizobium m
p03378 human immum
009349 caenorhabdi
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p09831 escherichia
060014 kluyveromyc
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200-105 AND 206-2 C., Vitali A., D Moritz R., Karp 1 growth factor- es non-covalent n angiogenesis, mulating their p mulating their p mulation of the ve their panellium in adult FR-3 (Flt4) rece and antiparalle	, Orlandini M., Dliviero S.; , and mapping to "; , and mapping to "; , vitali kinen T., Vitali b (VEGF-D) is a kl) and VEGF-C-553(1998).	Hirata Y.; lar endothelial g	ience update) station update) stor D precursor (VEGF- stariata; Vertebrata; E starrhini; Hominidae;	ALIGNMENTS RT; 354 AA.	UCAI PIG XENLA XENLA ACSU RAT RAT ACICA HUMAN YEAST YEAST YEAST
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PROSITE; PS000141; PDGF; 1.
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PROSITE; PS00278; PDGF_2; 1.
Mitogen; Growth factor; Glycoprotein; Signal;
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IL; Y12864; CAA73371.1; JOINED.
IL; Y12865; CAA73371.1; JOINED.
IL; Y12867; CAA73371.1; JOINED.
IL; Y12867; CAA73371.1; JOINED.
IL; Y12869; CAA73371.1; JOINED.
IL; Y12869; CAA73371.1; JOINED.
IL; Y12870; CAA73371.1; JOINED.
IL; Y12870; CAA73371.1; JOINED.
                                                                       ASELGKSTNTF 131
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TISSUE SPECIFICITY: Highly expressed in lung, heart, small intestine and fetal lung, and at lower levels in skeletal muscle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions.
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22 88 OR 99 (IN A MINOR
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OR 99 (IN A MINOR FORM).

VASCULAR ENDOTHELIAL GROWTH FACTOR D.
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Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-3 (Flt4) receptor (By similarity).
-!- SUBUNIT: Homodimer; non-covalent and antiparallel (By similarity).
                                                                                     SEQUENCE
                                                                                                              CARBOHYD
                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                       DISULFID
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ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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01-MAR-2002 (Rel. 41, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; P15692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AF014827; AAB66557.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus. NCBI_TaxID-10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      growth factor) (FIGF). FIGF OR VEGFD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Sprague-Dawley;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBURIT: Homodimer; non-covalent and antiparallel (by similarity)
SUBCELLULAR LOCATION: Secreted (By similarity)
PTM: Undergoes a complex proteolytic maturation which generates a
variety of processed secreted forms with increased activity towar
vEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer
linked by disulfide bonds before secretion. The fully processed
vEGF-D is composed mostly of two VEGF homology domains (VHDs)
bound by non-covalent interactions (By similarity).
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PS00249; PDGF_1; 1.
PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on pair of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth
                                                                                                                                                               263
282
306
116
147
147
151
141
150
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             factor;
                                                                                                                                  242
278
298
317
158
194
196
1196
1190
1190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              basic residues; Multigene family.
21 POTENTIAL.
                                                                               37112 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glycoprotein; Signal;
                                                                                        INTRACHAIN (BY SIMILARITY).

INTRACHAIN (BY SIMILARITY).

INTRACHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

N-LINKED (GLCNAC. . . ) (POTENTIAL).

N-LINKED (GLCNAC. . . ) (POTENTIAL).

N-LINKED (GLCNAC. . . ) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.

4 x 16 AA REPEATS OF C-X(10)-C-X-C-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
VASCULAR ENDOTHELIAL GROWTH FACTOR D.
                                                                                                                                                                                                                                                                                              4 (INCOMPLETE)
                                                                         1261AFA373596C00 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                        (APPROXIMATE).
51;
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70.8%;

DB

Length 326

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR 2002 (Rel. 41, Created)
01-MAR 2002 (Rel. 41, Last sequence update)
01-MAR 2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Orlandini M., Marconcini L., Ferruzzi R., Oliviero S.; "Identification of a c-fos-induced gene that is related to platelet-derived growth factor/vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN=C57BL/6J; TISSUE=Fibroblast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         growth factor) (FIGF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGD_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=98288130; PubMed=9622638;
Avantaggiato V., Orlandini M., Acampora D., Oliviero S., Simeone A.;
"Embryonic expression pattern of the murine figf gene, a growth fact
belonging to platelet-derived growth factor/vascular endothelial
growth factor family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=97030254; PubMed=8876195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FIGF OR VEGFD.
                                                                                                                                                                                                                                                                                        Baldwin M.E., Catinel B., Nice E.C., Roufail S., Hall N.E.,
Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;
"The specificity of receptor binding by vascular endothelial growth factor is different in mouse and man.";
J. Biol. Chem. 276:19166-19171(2001).

-i- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood migration and also has effects on the permeability of blood vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGER-3 (Flt4) receptor.

-- Gunnature Uncodiment of activates of Server and antivates of activates of Server and antivates of Server and activates of Server and Serv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=97349118; PubMed=9205122;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEVELOPMENTAL STAGE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genomics 42:483-488(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-21276411; PubMed-11279005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RECEPTOR SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amada Y., Nezu J.-I., Shimane M., Hirata Y.;
Molecular cloning of a novel vascular endothelial growth factor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 ASELGKSTNTF 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ASELGKTTNTF 136
                                                                                                  SUBUNIT: Homodimer; non-covalent and antiparallel.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Highly expressed in fetal and adult lung.
DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in severa
body structures and organs of the embryo such as limb buds,
acoustic ganglion, teeth, heart, anterior pituitary as well a
lung and kidney mesenchyme, liver, derma, and periosteum of t
PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward
                                                    vertebral column. INDUCTION: By the transcription factor c-fos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Natl. Acad. Sci. U.S.A. 93:11675-11680(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dev. 73:221-224(1998).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=9622638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90.98;
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1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
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                 activity toward
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     RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mitogen;
Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00341; PDGF; 1. ProDom; PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X99572; CAA67892.1; -. EMBL; D89628; BAA14002.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD; MGI:108037; Figf.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000072
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01-AUG-1991 (Rel. 19, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-FEB-1995 (Rel. 31, Last annotation update)
p-30 protein (EC 3.1.27.-) (Onconase).
Pana pipiens (Northern leopard frog).
Rana pipiens (Northern leopard frog).
                                                                                                                                                                                                                                                                                                                                                                                       RANPI
                                                                                                                                                                                                                                                                                                                                                            RN30_RANPI
TISSUE-Embryo;
MEDLINE-91093131; PubMed-1985896;
Ardelt W., Mikulski S.M., Shogen K.;
                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126 ASELGKTTNTF 136
                                                                             SEQUENCE
                                                                                                                             NCBI_TaxID=8404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bound by non-covalent interactions (By similarity).
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 ASELGKSTNTF 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SM00141; PDGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth factor; Glycoprotein; Signal; Repeat; on pair of basic residues; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      292
358 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VASCULAR ENDOTHELIAL GROWTH FACTOR D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 51; DB 1;
Pred. No. 0.054;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
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-LINKED (GLCNAC...) (POTENTIAL).
-LINKED (GLCNAC...) (POTENTIAL).
6636B17FBF07037C CRC64;
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                                                                                                                                                                      Euteleostomi;
Ranidae; Rana
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Best Local :
__CAEEL !
YNV5_CAEEL STANDARD; PRT; 409 AA P34568;
01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
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SEQUENCE
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"Refined 1.7 A X-ray crystallographic structure of P-30 protein, an amphibian ribonuclease with anti-tumor activity.";

J. Mol. Biol. 236:1141-1153(1994).

-1- FUNCTION: BASIC PROTEIN WITH ANTIPROLIFERATIVE/CYTOTOXIC ACTIVITY AGAINST SEVERAL TUMOR CELL LINES IN VITRO, AS WELL AS ANTITUMOR IN VIVO. IT EXHIBITS A RIBONUCLEASE-LIKE ACTIVITY AGAINST HIGH MOLECULAR WEIGHT RIBOSOMAL RNA.

-1- BEVELOPMENTAL STAGE: EARLY EMBRYOS (UP TO FOUR BLASTOMERE STAGE).
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                                                                                                                                                                                                                                                                                                        Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProDom;
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3D-STRUCTURE MODELING.
MEDLINE-93066156; PubMed-1438177;
Mosimann S.C., Johns K.L., Ardelt W., Mikulski S.M., Shogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Amino acid sequence of an anti-tumor protein from Rana pipiens occytes and early embryos. Homology to pancreatic ribonucleases."; J. Biol. Chem. 266:245-251(1991).
                                                                                                                                                                                                                 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-94166079;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lydrolase; Nuclease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X-RAY CRYSTALLOGRAPHY (1.7 ANGSTROMS).
MEDLINE-94166079; PubMed-8120892;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a novel antitumor protein
                                                                                                                                                                                                                                                      1 CASELGKSTNTFC 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Comparative molecular modeling and crystallization of P-30 protein: a novel antitumor protein of Rana pipiens oocytes and early
                                                                                                                                                                                                            CKYKLKKSTNKFC 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10NC; 31-JAN-94.
rPro; IPR001427; RNaseA.
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PS00127; RNASE_PANCREATIC; 1.
e; Nuclease; Endonuclease; 3D-structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  00074; rnaseA; 1.
PD000535; RNaseA; 1.
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                                                                                                                                                                                                                                                                                                      Conservative
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97
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                                                                                                                                                                                                                                                                                                                     59.7%;
61.5%;
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Pred. No. 0.
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Best Local
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InterPro: IPR002083; MATH.
Pfam; PF00051; BTB; 1.
Pfam; PF00917; MATH; 1.
SMART; SM00225; BTB; 1.
SMART; SM00225; BTB; 1.
SMART; SM00061; MATH; 1.
This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                          "Genome sequence of the endocellular bacterial symbiont of aphids Buchnera sp. APS.";
Nature 407:81-86(2000).
-!- PATHWAY: Decxyxylulose-5-phosphate pathway (DXP) of isoprenoid
                                                                                                                                                                                                                                                                                     INTB_BUCAI STANDARD; PRT; 319 AA. P57247; P57247; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation update)
                                  - ! - SIMILARITY: BELONGS TO THE LYTB FAMILY.
                                                                                                                                           STRAIN-TOKYO 1998;
MEDLINE-20445173; PubMed-10993077;
                                                                                                                                                                                                               Bacteria; Proteobacteria; gamma subdivision; Buchnera
                                                                                                                                                                                                                                       Buchnera aphidicola (subsp. Acyrthosiphon pisum) (Acyrthosiphon pisum
                                                                                                                                Shigenobu S., Watanabe H.,
                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                  Lyts protein
LYTS OR BU147
                                                                                                                                                                                                          NCBI_TaxID=118099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commarcial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                229 CKSDLGSPTQTF 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypothetical protein
DOMAIN 223 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS50097; BTB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; S42384; S42384.
WormPep; T16H12.5; CE00510.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases. -!- SIMILARITY: TO C.ELEGANS F37A4.9 AND HUMAN SPOP. -!- SIMILARITY: CONTAINS 1 BTB/POZ DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-0C7-2001 (Rel. 40, Last annotation update)
Hypothetical 46.4 kDa protein T16H12.5 in chr
T16H12.5.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity les 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CASELGKSTNTF 12
                                                         biosynthesis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               409 AA; 46414 MW;
                                                                                                                                                                                                                                                                              homolog.
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                                                                                                                             Hattori M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 39;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BTB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                           Sakaki Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9.9;
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                                                                                                                         Ishikawa
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pfam; PF02401; LYTB; 1.
Isoprene biosynthesis; Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Ret finger protein 2 (Leukemia associated protein 5) (B-cell chronic lymphocytic leukemia tumor suppressor Leu5) (Putative tumor suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    060858;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Syomova N., Kazakov A., Ibbotson R., van den Berg A., Gizatullin R., Fedorova L., Sulimova G., Zelenin A., Deaven L., Lehrach H., Grander D., Buys C., Oscier D., Zabarovsky E.R., Einhorn S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=98258969; PubMed=9599022;
Kapanadze B., Kashuba V., Baranova A., Rasool O., van Everdink W.,
Liu Y., Syomov A., Corcoran M., Poltaraus A., Brodyansky V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RPF2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Leukemia
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HUMAN
                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                               *RFP2 putative tumor suppressor gene: genomic organization, multiple mRNA isoforms and evaluation as a B-cell chronic lymphocytic leukaemia
                                                                                                                                                                                                                                                                                                                                                                                           "A cosmid and cDNA fine physical map of a human chromosome 13q14 region frequently lost in B-cell chronic lymphocytic leukemia and identification of a new putative tumor suppressor gene, Leu5."; FEBS Lett. 426:266-270(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                      -i- DISEASE: MAY BE INVOLVED IN B-CELL CI
(B-CLL) WITH A 13Q14 REGION DELETION
                                                                                                                                                                                                           Leukemia 0:0-0(2001).

Leukemia 0:0-0(2001).

TUMOR SUPPRESSOR.

TN R-CELL CHROL
                                                                                                                                                                                                                                                                 candidate."
                                                                                                                                                                                                                                                                                                                                      Baranova A.V., Sangfelt O., Ivanov D.V., Borodina T.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yankovsky N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     232 AELGKETGTF 241
                                                                                                                                            -!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                      (ankovsky N.K.;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69D8AFCC12DD09B8 CRC64;
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18;
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PMEB_E
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS50119; ZF_BBOX; 1.
PROSITE; PS00518; ZF_RING_1; 1.
PROSITE; PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00336; BBOX; SMART; SM00184; RING;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00643; zf-B_box; 1.
Pfam; PF00097; zf-C3HC4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIM; 605661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Pectinesterase B precursor (BC 3.1.1.11) (Pectin methylesterase B)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ERWCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Anti-oncogene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000315; Znf_bbox.
InterPro; IPR001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Erwinia chrysanthemi.
Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PMEB_ERWCH
Q47474;
                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMBL outstation. The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shevchik V.E., Condemine G., Hugouvieux-Cotte-Pattat N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PE B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OLIGOGALACTURONIDES PRESENT IN THE PERIPLASM.
-!- CATALYTIC ACTIVITY: Pectin + N H(2)0 - N methanol + pectate.
-!- SUBCELLULAR LOCATION: Attached to the outer membrane by a li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Robert-Baudouy J.;

"Characterization of pectin methylesterase B,

"Characterization of pertin methylesterase B,

Lipoprotein of Erwinia chrysanthemi 3937.";

Mol. Microbiol. 19:455-466(1996).

Mol. Microbiol. 19:455-466(1996).

THE DEGRAD:

-!- FUNCTION: PROBABLY INVOLVED IN THE DEGRAD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                entities requires a license agreement (S or send an email to license@isb~sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=96228695; PubMed=8830237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=556;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pectobacterium.
                                                        Pfam; PF01095; Pectinesterase;
                                                                                                                 EMBL; X84665; CAA59151.1;
                                                                                                                                                                                                                                                                                                                                                                                             - i - SIMILARITY: BELONGS TO THE PECTINESTERASE FAMILY.
                                                                                InterPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94 CKGHLGQPLNIFC 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CASELGKSTNTFC 13
                                                                                                                                                                                                                                                                                                                                                                                                                              INDUCTION: BY PECTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AJ224819; CAA12136.1; -. AF241849; AAK51624.1; -.
                                                                                IPR000070; Pectinesterase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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89
172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58
131
200
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        51.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Coiled coil.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B BOX-TYPE.
COILED COIL (POTENTIAL).
; E3B624345474AEBA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 37; DB Pred. No. 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RING-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IN THE DEGRADATION OF METHYLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         433 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             an outer membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by a lipid
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PROSITE;

PS00800; PECTINESTERASE\_1; 1. PS00503; PECTINESTERASE\_2; 1.

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                                          InterPro; IPR000008; C2.
InterPro; IPR00219; DAG_PE-bind.
InterPro; IPR000219; Euk_pkinase.
InterPro; IPR000961; Pkinase_C.
InterPro; IPR000861; REM_repeat.
InterPro; IPR002290; Ser_thr_pkinase.
Pfam; \PF00130; DAG_PE-bind; 2.
Pfam; PP00185; HR1; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                  EMBL; D14337; BAA03267.1; -.
EMBL; Z69730; CAA93602.1; -.
EMBL; Z69795; CAA93697.1; -.
PIR; S35362; S35362.
PIR; S35362; S35362.
                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                 use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Deviln K., Churcher C.M., Barrell B.G., Rajandream M.A., Walsh S.V., Submitted (FEB-1996) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: INVOLVED IN THE CONTROL OF THE CELL SHAPE. TARGET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  p36582;
01-JUN-1994 (Rel. 29, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
protein kinase C-like 1 (EC 2.7.1.-)
PCK1 OR SPAC22H10.01C OR SPAC17G8.14C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Toda T., Shimanuki M., Yanagida M.;
"Two novel protein kinase C-related genes of fission yeast are
essential for cell vlability and implicated in cell shape control.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schizosaccharomyces pombe (Fission yeast).
Eukaryota; Fungi; Ascomycota; Schizosaccharomycetes;
Schizosaccharomycetales; Schizosaccharomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCHP0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ЕМВО J. 12:1987-1995(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=93259141; PubMed=8491190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=4896;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCK1_SCHPO
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SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192 CATKAGATINTTC 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CASELGKSTNTFC 13
                                                                                                                                                                                                                                                                                                                                                                                                                           OF THE INHIBITOR STAUROSPORINE.
SIMILARITY: CONTAINS 2 ZINC-DEPENDENT PHORBOL-ESTER AND DAG
                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES
                                                                                                                                                                                                                                                                                                                                                                                      PKC SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                     BINDING DOMAINS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Serine esterase; Outer membrane; Lipoprotein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
pkinase_C; 1
; Cl; 2.
                             pkinase; 1.
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22 N
; 46793 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-ACYL DIGLYCERIDE, 4854AD25F7619B18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                         There are no restrictions on it no as its content is in no ved. Usanc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
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Best Local
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SMART; SM00074; HR1; 2.

SMART; SM00133; S_TK_X; 1.

SMART; SM00123; S_TKC; 1.

SMART; SM00220; S_TKC; 1.

PROSITE: PS00479; DAG_PE_BIND_DOM_1; 2.

PROSITE: PS050081; DAG_PE_BIND_DOM_2; 2.

PROSITE: PS00107; PROTEIN_KINASE_ATP; 1.

PROSITE: PS00108; PROTEIN_KINASE_ST; 1.
                                      Pfam;
                             Pfam;
                                                 InterPro; IPR000008; C2.
InterPro; IPR002219; DAG_PE-bind.
InterPro; IPR000719; Euk_pkinase.
InterPro; IPR000961; Pkinase_C.
InterPro; IPR000861; REM_repeat.
InterPro; IPR002290; Ser_thr_pkin
                                                                                                                                  EMBL;
                                                                                                                                                               between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN-C2 / ATCC 48329;
SCHEART Y. Yoder O.C.;
Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
-i-SIMILARITY: CONTAINS 2 ZINC-DEPENDENT PHORBOL-ESTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence of the correction (Rel. 40, Last annot protein kinase C-like (EC 2.7.1)
PKC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _COCHE
                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACT_SITE
CONFLICT
SEQUENCE
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BINDING
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KPC1_COCHE
042632;
                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=5016;
                                                                                                                                                                                                                                                                                                                                                                                                            Pleosporales;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Cochliobolus heterostrophus (Drechslera maydis).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               817 LGNTTSTFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 LGKSTNTFC 13
                                                                                                                                                                                                                                                                             SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES PKC SUBFAMILY.
               PF00130; DAG_PE-bind;
PF02185; HR1; 2.
PF00069; pkinase; 1.
                                                                                                                                 Y15839; CAA75801.1;
P05132; 1APM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 6; Conserver
                                                                                                                                                                                                                                                                                                                                                                                                                         Fungi; Ascomycota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            binding;
114 461
181 530
564 923
570 678
693 693
789 789
27 35
                                                                                                                                                                                                                                                                                                                                                                                                          Pleosporaceae; Cochliobolus.
pkinase_C;
             pkinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                     Ser_thr_pkinase.
2-bind; 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           51.4%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update
(EC 2.7.1.-).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PHORBOL-ESTER AND DAG
PROTEIN KINASE.
ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AMVASTKNP -> SNGGFDGES (IN 0969BDEC1AB43C4E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHORBOL-ESTER AND PHORBOL-ESTER AND
                                                                                                                                                                                                                                                                                                                                                                                                                      Pezizomycotina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1174 AA
                                                                                                                                                                                (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
56;
                                                                                                                                                                                                                                                                                                               PHORBOL-ESTER AND DAG
                                                                                                                                                                                                                                                                                                                                                                                                                     Dothideomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
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BINDING 2.
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SMART; SM00074; HR1; 2.
SMART; SM00074; HR1; 2.
SMART; SM00133; S_TK_X; 1.
SMART; SM00133; S_TK_X; 1.
SMART; SM00120; S_TKC; 1.
PROSITE; PS00479; DAG_PE_BIND_DOM_1; 2.
PROSITE; PS00107; PROTEIN_KINASE_TP; 1.
PROSITE; PS00107; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
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ACT_SITE
SEQUENCE
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DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      008234: Q08233;
01-NOV-1997 (Rel. 35, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Probable ATP-dependent transporter YOL074C/YOL075C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NP_BIND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Phorbol-ester
                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

MEDLINE-97321807; PubMed-9178509;
MEDLINE-97321807; PubMed-9178509;
Tzermia M., Katsoulou C., Alexandraki D.;
Tzermia M., Katsoulou C., Alexandraki D.;
Tsequence analysis of a 33.2 kb segment from the left arm of yeast
Chromosome XV reveals eight known genes and ten new open reading
frames including homologues of ABC transporters, inositol
phosphatases and human expressed sequence tags.";
Yeast 13:583-589(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                               Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                             Saccharomycetales; NCBI_TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YOL074C/YOL075C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YOH5_YEAST
         InterPro; IPR003593; AAA.
InterPro; IPR003439; ABC_transportr.
InterPro; IPR001687; ATP_GTP_A.
Pfam; PF00005; ABC_tran; 2.
                                                                       EMBL; 274817; CAA99085.1; -. EMBL; 274816; CAA99084.1; -. SGD; S0005435; YOL075C.
                                                                                                                                                                                                                                                         -!- SUBCELLULAR LOCATION: Integral membrane protein (Potential).
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1174
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59 506
27 576
704 709
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ATP (BY SIMILARITY).

ATP (BY SIMILARITY).

BY SIMILARITY.
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POLY-PRO.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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TRANSMEM TRANSMEM
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P16757;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS00211; ABC, Hypothetical protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1161 CGERLGIMTNTF 1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human cytomegalovirus (strain AD169).
Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
Betaherpesvirinae; Cytomegalovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence up
01-FEB-1991 (Rel. 17, Last annotation
Hypothetical protein UL16.
                                                                                                                                                                                    the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                              Chee M.S., Bankier A.T., Beck S., Bohni R., Brown C.M., Cerny R., Horsnell T., Hutchison C.A. III, Kouzarides T., Martignetti J.A., Preddie E., Satchwell S.C., Tomlinson P., Weston K.M., Barrell B.G.; "Analysis of the protein-coding content of the sequence of human cytomegalovirus strain AD169.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE=90269039; PubMed=2161319;
                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                           Curr. Top. Microbiol. Immunol. 154:125-169(1990).
                                                                                                                               EMBL; X17403; CAA35448.1; PIR; S09778; S09778.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10360;
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ein; ATP-binding; Transmembrane; Glycoprotein;
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PPNK, HALUI

ID PPNK, H

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DT 16-QCT

DT 16-QCT

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QC Archae
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RC TISSUE
RX PUBMEd
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                                          16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Probable inorganic polyphosphate/ATP-NAD kinase (EC 2.7.1.23)
PPNK OR VNG1900C.
Archaea; Euryarchaeota; Halobacteriales; Halobacteriaceae;
                                       Halobacterium sp.
                                                                                                                                                                                                                                         Q9HNX7;
                                                                                                                                                                                                                                                          PPNK_HALN1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AJ224442; CAA11944.1; -.
InterPro; IPR000051; SAM_bind.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MTHH_HUMAN STANDARD; PRT; 220 AA. 043709; 15-JUL-1999 (Rel. 38, Created) 15-JUL-1999 (Rel. 38, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Putative methyltransferase HUSSY-3 (EC 2.1.1.-).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stanchi F., Bertocco E., Toppo S., Dioguardi R., Simionati B., Cannata N., Zimbello R., Lanfranchi G., Valle G.; "Characterization of 16 novel human genes showing high similarity
                                                                                                                                                                                                                                                                                                                                                                                               178 CAGELGDST 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Transferase; Methyltransferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
CARBOHYD
CARBOHYD
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-1- SIMILARITY: BELONGS TO THE METHYLTRANSFERASE SUPERFAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PubMed=11124703;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
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· 132
145
230 AA;
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                                       (strain NRC-1)
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57.1%;
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Pred. No. 19;
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Pred. No. 16
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N-LINKED (GLCNAC. ...) (PO
N-LINKED (GLCNAC. ...) (PO
; B72F2C241C569967 CRC64;
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(GLCNAC. . .) (POTENTIAL).
(GLCNAC. . .) (POTENTIAL).
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RESULT 1:
BCA_STRVL
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                                                    SEQUENCE FROM N.A.

STRAIN-ATCC 10712 / ISP5230;

MEDLINE-97022081; PubMed-8868441;

Facey S., Gross F., Vining L.C., Yang K., van Pee K.-H.;

"Cloning, Sequencing and disruption of a bromoperoxidase-catalase gene in Streptomyces venezuelae; evidence that it is not required that it is not required
  chlorination in chloramphenicol biosynthesis.";
Microbiology 142:657-665(1996).
-i- CATALYTIC ACTIVITY: 2 H(2)0(2) - 0(2) + 2 H(2)0.
-i- SIMILARITY: BELONGS TO THE CATALASE FAMILY.
                                                                                                                                                Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.
NCBI_TaxID-1936;
                                                                                                                                                                                 Bacteria;
                                                                                                                                                                                                                 01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-CCT-1996 (Rel. 34, Last annotation update)
Bromoperoxidase-catalase (EC 1.11.1.-).
                                                                                                                                                                          Streptomyces violaceus (Streptomyces venezuelae).
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
                                                                                                                                                                                                                                                                                     BCA_STRVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AE005089; AAG20093.1; -. InterPro; IPR002504; DUF15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fransferase; Kinase; NAD; NADI
SEOUENCE 282 AA; 29120 MW;
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NCBI_TaxID=64091;
[1]
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nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                    44 CAGECGRDTTAF 55
                                                                                                                                                                                                                                                                                                                                                                            1 CASELGKSTNTF 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           similarity).
SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
SIMILARITY: BELONGS TO THE NAD KINASE FAMILY.
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                                                                                                                                                                                                                                                                                      STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                50.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                Score 36; DB
Pred. No. 24;
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5DA1AF25147D7500 CRC64;
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DR PIR; S37055; S37055.
DR PIR; S37055; S37055.
DR HSSP; P4321; 2CAE.
DR HSSP; P4321; 2CAE.
DR InterPro; IPR002226; Catalase.
DR Pfam; PF00199; catalase; 1.
DR PFAM; PF00197; CATALASE; 1.
DR PROSITE; PS00437; CATALASE_1; 1.
DR PROSITE; PS00438; CATALASE_2; 1.
DR PROSITE; PS00438; CATALASE_2; 1.
DR PROSITE; PS00438; CATALASE_2; 1.
DR PROSITE; PS00438; CATALASE_3; 1.
DR PROSITE; PS00438; CATALASE_1; 1.
DR PROSITE; PS00438; CATALA
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Best Local Similarity 70.0
Matches 7; Conservative
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                                                                                                                                                                                                        80 SEVGKRTETF 89
                                                                                                                                                                                                                                                                                           3 SELGKSTNTF 12
                                                                                                                                                                                                                                                                                                                                                                                                                      50.0%;
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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Perfect score:
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                  Database :
                                                                                                                                                                                                                    SPTREMBL_19:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
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13.011 Million cell updates/sec
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72
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Gapop 10.0 , Gapext 0.5
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                                                                                                                                      sp_mammal:*
sp_mhc:*
sp_organelle:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
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                                                                                                                                                                                     sp_fungi:*
sp_human:*
sp_invertebrate:*
                                                                            sp_rodent:*
sp_virus:*
                                                                                                         sp_plant:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARI

Result No.	Score 51	Query Match	Query Match Length DB	DB 11	ID 091ZE4	Des	Description Q91ze4 rattus norv
2	49	68.1	127	13	Q918V8	Q	0918v8 rana pipier
ω	43	59.7	997	տ	Q967Z1	Q9(	1967z1 trypanosoma
4	42	58.3	1011	ω	Q9P944	Q9 <sub>1</sub>	19p944 pneumocysti
u	41	56.9	316	13	Q90ZB2	Q	Q90zb2 brachydanic
0	41	56.9	397	16	Q92CN9	Q	92cn9 listeria i
7	40	55.6	383	12	Q84551	٥	284551 paramecium
8	39	54.2	128	13	Q9DFY7	Ö	_
9	39	54.2	471	10	Q9FHK1	Q	
10	39	54.2	677	10	Q9FLD9	۵	9fld9 arabidopsis
11	39	54.2	1117	10	Q9M133	Q	9m133 arabidopsis
12	38	52.8	23	ν	Q9R4A0	09	9r4a0 lactobacil
13	38	52.8	24	N	Q9R499	60	9r499 Lactobacii
14	38	52.8	49	w	Q9UUP2	29	9uup2 pneumocyst
15	38	52.8	128	13	09DFY8	0	Q9dfy8 rana catesr
							TIMM: DEMINA RUNDIN

45	44	43	42	41 .	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
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ч	ω	10	15	15	15	15	16	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	5	N	w	15	15
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## ALIGNMENTS

RES Q9I ID AC DT DT	dd Y Ag	RESULT Q91ZE4 AC
RESULT 2  Q918V8 ID Q918V8 PRELIMINARY; PRT; 127 AA.  AC Q918V8; DT 01-OCT-2000 (TrEMBLrel. 15, Created) DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)	Query Match 70.8%; Score 51; DB 11; Length 326; Best Local Similarity 90.9%; Pred. No. 0.18; Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0; 2 ASELGKSTNTF 12	DULT 1 ZE4 Q91ZE4; Q91ZE4; Q91ZE4; O1-DEC-2001 (TrEMBLrel. 19, Created) O1-DEC-2001 (TrEMBLrel. 19, Last sequence update) O1-DEC-2001 (TrEMBLrel. 19, Last annotation update) VEGF-D. Rattus norvegicus (Rat). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Rattus. NCBI_TaxID=10116; [1] SEQUENCE FROM N.A. STRAIN=SPRAGUE-DAWLEY; KIrkin V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J., Pepper M.S., Giannis A., Sleeman J.P.; "Characterization of indolinones which specifically inhibit VEGF-C-and VEGF-D-induced activation of VEGFR-3 but not VEGFR-2."; EUGI. AV332728; AAK96008.1; - SEQUENCE 326 AA; 37106 MW; D7CAEBA6C9FABB7D CRC64;

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RESULT
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1D 006721
AC 000
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Best Local
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Q9x944;
          01-OCT-2000 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bell J.S., Harvey T.I., Sims A.M., Barry J.D., McCullock Cloning and characterization of two Muts homologs and the homologs from Trypanosoma brucei.; Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AF350880; AAK51796.1; ...
SEQUENCE 997 AA; 110417 MW; DBFDCA3D8D2642A3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
PUTATIVE MISMATCH REPAIR PROTEIN MSH8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q967Z1;
Q967Z1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN-MITAT1.2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trypanosoma bruce1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Interpro; ipr001427; RNaseA.

Interpro; ipr001427; RNaseA.

Pfam; PF00074; rnaseA; 1.

ProDom; PD000535; RNaseA; 1.

SMART; SM00992; RNASe_Pc; 1.

PROSITE; PS00127; RNASE_PANCREATIC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                       460
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AF165133; AAF76935.1; -. HSSP; P22069; 1ONC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=20330357; PubMed=10871370;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rana pipiens (Northern leopard frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ONI-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=8404;
                                                                                                                                                                                                                                                                                                                                                                                                 1 CASELGKSTNTF 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98 CKYKLKKSTNTFC 110
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity 7; Conserv
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9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euglenozoa; Kinetoplastida; Trypanosomatidae; Trypanosoma
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                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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14491 MW;
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58.3%;
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69.2%;
              15,
19,
Last sequence update)
Last annotation update)
                                                                                Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 18;
B; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 43; DB
Pred. No. 18;
                                                                                                                                                     PRT;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B8511DC5407AB69B CRC64;
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                                                                                                                                                 1011 AA
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clease contains
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Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MutL
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Q90ZB2
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Best Local Similarity
"atches 7; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                             Query Match
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InterFro; IPR002884; P_domain.
InterPro; IPR002985; P_rich_extensn.
InterPro; IPR002985; P_rich_extensn.
InterPro; IPR002985; P_rich_extensn.
InterPro; IPR00283; P:
InterPro; IPR00283; P:
IPR00787; PR001217; PRICHEXTENSN.
IPRNTS; PR001217; PRICHEXTENSN.
IPRNTS; PR00723; SUBTILISIN.
IPRODOm; PD000717; P_domain; 1.
IPROSTITE; PS00137; SUBTILASE_HIS; UNKNC
                                                                                                                "Gbx2 but not gbx1 is dependent on fgf8 function."; Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AF288763; AAK83070.1; -. BC32955EA5430D8A CRC64; SEQUENCE 316 AA; 34408 MW; DC32955EA5430D8A CRC64;
                                                                                                                                                                                                                                     Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Cypriniformes; Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                     Q90ZB2;
01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                           Brand M.;
                                                                                                                                                                                                                                                                                                  GBX1
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SEQUENCE
                                                                                                                                                                                      Lun K.,
                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                            TRANSCRIPTION FACTOR GBX1.
                                                                                                                                                                                                                                                                                                                                                                               Q90ZB2
                                                                                                                                                                                                                           NCBI_TaxID=7955
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.

MEDLINE=20184731; PubMed=10721706;

Lee L.H., Gigliotti F., Wright T.W., Simpson-Haidaris P.J.,

Weinberg G.A., Haidaris C.G.;

Weinberg G.A., Haidaris C.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene 242:141-150(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Molecular characterization of KEX1, a kexin-like protease in Pneumocystis carinii.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pneumocystis carinii f. sp. muris
Eukaryota; Fungi; Ascomycota; Pneu
63 ASFAGRLTNTFC
                                                                                                                                                                                                                                                                                                                                                                                                                                             246 CAGEIVAAKNTFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=42066;
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                                                               Local
                        2 ASELGKSTNTFC 13
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                                                    Similarity
8; Conser
                                                                                                                                                                                      Thisse C.,
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                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                 Thisse B., Amores A., Yan Y., Postlethwait
                                                                                                                                                                                                                                                                                                                                                                                                                                               258
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                                                               56.98;
66.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.3%;
53.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112021 MW;
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W; DC32955EA5430D8A CRC64;
                                                                                                                                                                                                                                                                                                                       Last annotation
                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                   Last sequence update)
                                                              Score 41; DB
Pred. No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 42; DB
Pred. No. 28;
                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                              Mismatches
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                                                                                                                                                                                                                                                                                                                                                                         316 AA
                                                                                                                                                                                                                                                             Vertebrata; Euteleostomi;
                                                                           13;
                                                                                                                                                                                                                                                                                                                     update)
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                                                                        Length 316;
                                                Indels
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RESULT Q92CN9

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RANGE REPARATE
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Best Local :
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Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,
Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,
Entian K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,
Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,
Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
"Comparative genomics of Listeria species.";
Contore 201. Marchael P., Blocker P.,
Colore 201. Marchael P., Blocker P.,
Colore 201. Marchael P., Brand P., Voss H., Wehland J., Cossart P.;
"Comparative genomics of Listeria species.";
                                                                                                                                                                                                                                                                                                              MEDLINE-96187795; PubMed-8614977;
MEDLINE-96187795; PubMed-8614977;
Lu Z., Li Y., Que Q., Kutish G.F., F
"Analysis of 94 kb of the chlorella
positions 88 to 182.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1996 (TrEMBLrel. 01-NOV-1996 (TrEMBLrel. 01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE 397 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Science 294:849-852(2001).
EMBL; AL596167; CAC96363.1; -.
ListiList; LIN01132; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=CLIP 11262 / SEROVAR 6A;
                                                                                                                             MEDLINE=20013326; PubMed=10544099;
Kaiser A., Vollmert M., Tholl D., Graves M.V., Gurnon J.R.,
Lisec A.D., Nickerson K.W., Van Etten J.L.;
"Chlorella virus PBCV-1 encodes a functional homospermidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Paramecium bursaria chlorella virus 1
Viruses; dsDNA viruses, no RNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q84551;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=1642
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                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                        Virology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10506;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A231L PROTEIN.
  SEQUENCE FROM N.A. MEDLINE=20478054;
                                                                            Virology 263:254-262(1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
nes 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CASELGKSTNT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
  PubMed=11021991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43115 MW;
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72.7%;
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19,
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Last sequence update)
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Last sequence update)
Last annotation updat
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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a virus PBCV-1 330-kb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phycodnaviridae; Phycodnavirus
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16;
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Best Local :
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01-mAR-2001 (TrEMBLrel. 16, Creaton-
01-OCT-2001 (TrEMBLrel. 18, Last:
01-DEC-2001 (TrEMBLrel. 19, Last:
RC-RNASE3 RIBONUCLEASE PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                            Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
NCBI_TaxID=8400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurnon J.R., Graves M.V., Van Etten J.L.;
Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases
EMBL; U42580; AAC96599.1; -.
SEQUENCE 383 AA; 43643 MW; B04E602D99973DCF CRC64;
                                                                                                                                                                                                                                                  catesbeiana (bullfrog).";
Nucleic Acids Res. 28:4097-4104(2000).
                                                                                                                                                                                                                                                                                        MEDLINE-20512555; PubMed-11058105;
Liao Y.D., Huang H.C., Leu Y.J., Wei C.W., Tang P.C.,
"Purification and cloning of cytotoxic ribonucleases"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9DFY7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. Graves M.V., Van E
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                                                                                                                                   Pfam; PF00074; rnaseA; 1. ProDom; PD000535; RNaseA; 1.
                                                                                                                                                                                                   EMBL; AF242554; AAG31440.2; HSSP; P22069; IONC.
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  SEQUENCE
                                                                    Signal.
                                                                                           PROSITE;
                                                                                                                   SMART;
                                                                                                                                                                                                                                                                                                                                                                 TISSUE=LIVER;
                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                                   InterPro; IPR001427; RNaseA.
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nes 6; Conserv
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                                                                                                                   SM00092;
                                                                                           PS00127;
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    128 AA;
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                                                                                                                   RNAse_Pc;
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                                                                                           RNASE_PANCREATIC; UNKNOWN_1.
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46.28;
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Pred. No.
RC-RNASE3 RIBONUCLEASE.
2B14986082E0587D CRC64;
                                                 POTENTIAL.
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Ranidae; Rana.
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EMBL; AB026661; BAB10975.1; J
InterPro; IPR001810; F-box; 1.
Pfam; PF00646; F-box; 1.
SMART; SM00256; FBOX; 1.
SMART; SM00256; FBOX; 1.
SEQUENCE 471 AA; 55212 MW;
                                                                                                                                                                                                                                                                                               Q9FLD9 PRELIMINARY; PKT; 0// An. Q9FLD9; 01-MAR-2001 (TrEMBLrel. 16, Created) 01-MAR-2001 (TrEMBLrel. 16, Last sequence update) 01-MAR-2001 (TrEMBLrel. 16, Last annotation update) SIMILARITY TO HEDGEHOG-INTERACTING PROTEIN.
STRAIN-COLUMBIA;
MEDLINE-98290546; PubMed-9628582;
Sato S., Kaneko T., Kotani H., Nakamura Y., As
Tabata S.;
"Structural analysis of Arabidopsis thaliana c
"Structural analysis of the regions of 1.456,315
physically assigned P1 and TAC clones.";
                                                                                                                                                                                                                           Arabidopsis thaliana (Mouse-ear cress).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eueurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
GENOMIC DNA, CHROMOSOME 5, P1 CLONE:MAB16.
Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheop Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                        NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    features of the clones.";
DNA Res. 7:31-63
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Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-COLUMBIA; MEDLINE-20181125;
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Y., Kaneko T., K
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60.0%;
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Pred. No. 47;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
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Mismatches
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Best Local :
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Q9M133;
Q1-OCT-2000 (
                       Tahara T., Oshimura M., Umezawa C., Kanatani "Isolation, partial characterization, and mod J1132, a two-component bacteriocin produced bacidophilus JCM 1132.";
                                                                                                            MEDLINE=97076919; PubMed=8975617;
                                                                                                                                   SEQUENCE
                                                                                                                                                                                                      Bacteria; Firmicutes; Lactobacillus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EU Arabidopsis sequencing project;
Submitted (MAR-2000) to the EMBL/G
EMBL; AL161491; CAB80949.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-OCT-2000 (TrEMBLrel. 15, Created) 01-OCT-2000 (TrEMBLrel. 15, Last sequence up 01-DEC-2001 (TrEMBLrel. 19, Last annotation HYPOTHETICAL 126.0 KDA PROTEIN.
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EMBL; AB010077; BAB10221.1;
SEQUENCE 677 AA; 74196 M
                                                                                                                                                                               NCBI_TaxID=1579;
                                                                                                                                                                                                                                                Lactobacillus acidophilus.
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Mayer K.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eu
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical protein. SEQUENCE 1117 AA; 126000
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58.3%;
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62:892-897(1996).
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Pred. No. 1
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                                         ., Kanatani K.;
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produced by La
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01-MAY-2000 (TrEMBLrel. 13, Last annotat
ACIDOCIN J1132 BETA PEPTIDE (FRAGMENT).
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01-MAY-2000 (TrEMBLrel. 13,
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"Isolation, partial characterization, and mode of action of Acidocin
J1132, a two-component bacteriocin produced by Lactobacillus
acidophilus JCM 1132.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lactobacillus acidophilus.
Bacteria; Firmicutes; Bacillus/Clostridium group; Lactobacillaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9R499
                                                                                                                                                                                                                                                               Russian D.A., Andrawis-Sorial V., Kovacs J.A.; Submitted (DEC-1996) to the EMBL/GenBank/DDBJ databases EMBL; U8295; AAR21236.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                   InterPro; IPR000209; Peptidase_S8
Pfam; PF00082; Peptidase_S8; 1.
                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                    Pneumocystis
                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes; Pneumocystidaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Pneumocystis carinii f. sp. carinii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEXIN (FRAGMENT).
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                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=38081;
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    1 CASELGKSTNTFC 13
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RCE 24 AA; 2326 MW; E1141D87B690775D CRC64;
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3; Mismatches
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Search completed: June 17, 2002, 16:23:34 Job time: 1608 sec

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RESULT
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QQDEY8;

Ol-MAR-2001 (TrEMBLrel. 16, Created)

Ol-MAR-2001 (TrEMBLrel. 16, Last sequence update)

Ol-DEC-2001 (TrEMBLrel. 19, Last annotation update)

RC-RNASE2 RIBONUCLEASE PRECURSOR.

Rana catesbeiana (Bull frog).

ERKARYOTA: Metazoa; Chordata; Craniata; Vertebrata; Eulanphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Rar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-LIVER;
Liao Y.-D., Huang H.-C., Leu Y.-J., Wei C.-W., Tang P.-C.,
Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF24253; AAG31439.1; -.
EMBL; P22069; IONC.
TENERAL TERROLATION CONTROLATION 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20512555; PubMed=11058105;
Liao Y.D., Huang H.C., Leu Y.J., Wei C.W., Tang P.C., Wang
"Purification and cloning of cytotoxic ribonucleases from
catesbeiana (bullfrog).";
Nucleic Acids Res. 28:4097-4104(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00074; rnaseA; 1.
ProDom; PD000535; RNaseA; 1.
SMART; SM00092; RNASe_Pc; 1.
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                                                                                    1 CASELGKSTNTFC
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CHYKLKKSSNTIC 110
                                                                                                                                                                                  Similarity 53.77; Conservative
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53.8%;
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                                                                                                                                                                                                                                    Score 38; DB 13; Pred. No. 19;
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Ranidae; Rana
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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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1: /SIDS1/gcgdata/ho
2: /SIDS1/gcgdata/ho
3: /SIDS1/gcgdata/ho
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Human Vascutar end	AAY70983	21	354		54	25
	AAY70750	21	354		54	24
	AAB29049	21	354		54	23
AEGD Pr	AAB10649	21	354		54	
- 5	AAW44293	19	354	5	54	21
CO.	AAW53241	19	354	5	ر 4	20
	AAW49036	19	354	<u>ب</u>	54	9
A F.G.F. D	AAY97572	22	325	ŗ	54	18
sapiens	AAW53240	19	325	75.0	54	17
_	AAB11931	21	109	5	54	16
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י כ	AAU04522	22	73	75.0	54	w i
-	AAU04548	22	17	84.7	61	12

## ALIGNMENTS

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RESULT
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                                                                                                                                                                                                                          Human; VEGF; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                         AAU04524 standard; Peptide; 13 AA.
                                                                                                                                                                                                                                                                                    VEGF based monocyclic peptide 1.
                                                                                                                                                                                                                                                                                                                                   AAU04524;
                                                                                                                                                                       Disulfide-bond
                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                            26-SEP-2001 (first entry)
                                                                                                                                    WO200152875-A1.
                                                                                                               26-JUL-2001.
         Achen MG, Hughes RA, Stacker S,
                                (LUDW-) LUDWIG INST CANCER RES
                                                       18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                        18-JAN-2001; 2001WO-US01533
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                                                                                                                                                                                  Location/Qualifiers
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               Cendron A;
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RESULT
AAU04527
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CC cerebrovascular accident, post-anglopasty restenosis, head, heat or cold normone-related anglogenic dysfunction, diabetes induced neovascular cold cc sequelae, hypertension induced neovascular sequelae, or chronic liver in amammal (the mammal has a condition characterised by fluid or brain. The peptides are also used to independent characterised by fluid or brain. The monomeric and bicyclic peptides are used to interfere are used to interfere and cological activity induced by VEGF-C or -D and chronic inflammation. Assertially rhoused by VEGF-C or -D and chronic inflammation. Assertially rhoused by VEGF-C or -D and chronic inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                               Disulfide-bond
                                                                                                                                                                                                                                                                                 neovascularisation: lymphangiogenesis; psoriasis; tumour;
diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                 Disulfide-bond
                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                           VEGF based bicyclic dimeric peptide #1.
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                                                                                                                                                                                                                                                                              diabetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU04527 standard; Protein; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 angiogenesis,
loop fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oxidizing the cysteine residues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            caselgkstntfc 13
                                                                                                                                                                                                                                                                   retinopathy; chronic inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
/note= "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form a dimeric peptide, or to residue 1 of the sequence
                                                                                               /note= "This bond cyclises the 17
                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 72;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 22;
                                                                                                          peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
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VEGF based monocyclic peptide 12.

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Characterised by anglogenesis, neovascular temour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold formone-related anglogenic dysfunction, diabetes induced neovascular cold confection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid cacumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, cor brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere curit at least one biological activity induced by VEGF, VEGF-C or -D and characterised in combination with an anti-inflammatory agent, to treat a continuous process of the combination with an anti-inflammatory agent, to treat a continuous continuous combination with an anti-inflammatory agent, to treat a continuous continuou
                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
      26-SEP-2001
                                                               AAU04534;
                                                                                                      AAU04534 standard; Peptide; 13 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGFD (vascular endothelial growth factor). The invention relates to a beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by axidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with anglogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by ancionancia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chronic inflammation, especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequence represents a dimeric bicyclic peptide of the invention whose 3 dimensional structure is modelled on the expose loop of hum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 59; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 oxidizing the cysteine residues
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nes 13; Conserv
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                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                 1 caselgkstntfc 13
                                                                                                                                                                                                                                                                                                                    1 CASELGKSTNTFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17 AA;
(first entry)
                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 72; DB 22; 100.0%; Pred. No. 1.3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stacker S,
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                                                                                                                                                                                                                                                                                                                                                                        Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cendron
                                                                                                                                                                                                                                                                                                                                                                                                                        Length 17;
                                                                                                                                                                                                                                                                                                                                                               0;
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                                                                                          Matches
                                                                                                                              Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restanosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive bormono-related angiogenic discharge disabetes induced necessive bormono-related angiogenic discharge disabetes induced necessive
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                          hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere vasculature. The monomeric and bicyclic peptides are used to interfere vasculature. The monomeric and bicyclic peptides are used to interfere vasculature. The monomeric and bicyclic peptides are used to interfere are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and disports.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JAN-2000;
16-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JAN-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human vEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-442248/47
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                                                                                                                                                                                                   Sequence
                                                                                                             Local
                                             1 CASELGKSTNTFC 13
1 catelgkstntfc 13
                                                                                                                Similarity
                                                                                                                                                                                                                                              retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hughes RA,
                                                                                                                                                                                                     13 AA;
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2000US-0204590.
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                                                                                          Conservative
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                                                                                                                95.8%;
92.3%;
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                                                                                                                Score 69; DB 22;
Pred. No. 3.3e-05;
                                                                                            Mismatches
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AAU04546
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                characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benique tumour, post-recovery hemangioma, vascularised malignant or benique tumour, head, heat or col cerebrovascular accident, post-angioplasty restenosis, head, heat or col trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by vEGF. VEGF-C or -D and with at least one biological activity induced by vEGF.
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                                                                                                                                                                                                                                                                                                        VEGED (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, deleted prior to cyclisation are used to interfere with angiogenesis deleted prior to cyclisation are used to interfere with angiogenesis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 26; Page 49; 102pp; English.
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    are also used in combination with an anti-inflammatory agent,
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2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "A disulfide bond forms between residue
17 and residue 17 of an identical peptide to form
a dimeric peptide"
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AAU04550
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whose 3-dimensional structure is modelled on the expose loop of human vEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked deleted prior to cyclisation are used to interfere with anglogenesis, necovascularisation or lymphangiogenesis in a mammal with a condition
                                                                                                                                                                                                                          Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                    The sequence represents a dimeric bicyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of huma
                                                                                                                                                                                       Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                         oxidizing the cysteine residues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; VEGF; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF based bicyclic dimeric peptide #7.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 catelgkstntfc 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CASELGKSTNTFC 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ر
د
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                             Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17 AA;
                                                                                                                                                                                                                                                                                                                                                                                       2000US-0176293.
2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "This bond cyclises the peptide" 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "A disulfide bond forms between residue
17 and residue 1 of the sequence appearing as AAU04528,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95.8%;
92.3%;
                                                                                                                                                                                                                                                                                                                             Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a dimeric peptide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 69;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                            Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
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AAU04535
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cc characterised by angiogenesis, neovascularisation or lymphangiogenesis.

Cc The condition is diabetic retinopathy, psoriasis, arthropathy,

Cc hemangioma, vascularised malignant or benign tumour, post-recovery

Cc cerebrovascular accident, post-angioplasty restenosis, head, heat or cold

Cc trauma, substance-induced neovascularisation of the liver, excessive

Cc sequelae, hypertension induced neovascular sequelae, or chronic liver

Cc infection. The peptides are also used to modulate vascular permeability

Cc accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,

Cc are also used in combination and bicyclic peptides are used to interfere

Cc with at least one biological activity induced by VegGP, VegGP-C or -D and

Cc are also used in combination with an anti-inflammatory agent, to treat a

Cc diabatic refinemation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                         Achen MG,
                                                                                                                                                                                                             18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                  (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                         18-JAN-2001; 2001WO-US01533.
                                                                                                                                                                                                                                                                                                                 WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                         Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                        26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                 diabetic
                                                                                                                                                                                                                                                                                                                                                                                                                                     neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF based monocyclic peptide 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU04535 standard; Peptide; 13 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU04535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 caselgkstntyc 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CASELGKSTNTFC 13
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                                                                                                                         2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                          retinopathy; chronic inflammation; cyclic.
                                                                                                                                                      Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                    /note= "This bond cyclises the peptide"
                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95.8%;
92.3%;
                                                                                                                                                     Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 69; DB 22;
Pred. No. 4.3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
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The sequence represents a monomeric monocyclic peptide of the invention,

Example 25; Page 47; 102pp; English.

the cysteine residues

Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphanglogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by

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RESULT
AAU04537
ID AAUU
XX
AC AAUU
XX
AC AAUU
XX
AC AAUU
XX
AC AAUU
XX
Huma
KW neo
CS Syn
CS Syn
CS Syn
CS Syn
WO 26-
PN WO2
PN WO2
PN H8-
PR 18-
PR 18-
PR 18-
PR 18-
PR 11-
PA (LU
PA ACL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CC characterised by anglogenesis, neovascularisation or lymphanglogenesis.

CC The condition is diabetic retinopathy, psoriasis, arthropathy,

CC hemangioma, vascularised malignant or benign tumour, post-recovery

CC hemangioma, vascularised malignant or benign tumour, post-recovery

CC cerebrovascular accident, post-angloplasty restenosis, head, heat or cold

CC trauma, substance-induced neovascularisation of the liver, excessive

CC hormone-related anglogenic dysfunction, diabetes induced neovascular

CC sequelae, hypertension induced neovascular sequelae, or chronic liver

CC infection. The peptides are also used to modulate vascular permeability

CC in a mammal (the mammal has a condition characterised by fluid

CC in a mammal (the mammal limbs or in lungs, peritoneal cavity, pleura,

CC or brain. The peptides are used to image blood vessels and lymphatic

CC vasculature. The monomeric and bicyclic peptides are used to interfere

CC with at least one biological activity induced by VEGF, VEGF-C or -D and

CC chronic inflammation, especially rheumatoid arthritis, psoriasis and

CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring the period of producing a monomeric monocyclic peptide by a measuring peta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis deleted prior to cyclisation are used to interfere with an condition neovascularisation or lymphanglogenesis in a mammal with a condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           whose 3-dimensional structure is modelled on the expose loop of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                              neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF based monocyclic peptide 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU04537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU04537 standard; Peptide; 13 AA
                                                                                                                                                                                                                                                                       WO200152875-A1
                                                                                                                                                                                                                                                                                                                                       Disulfide-bond
                                                                                                          18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                             18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                          26-JUL-2001.
                       Achen MG,
                                                                  (LUDW-) LUDWIG INST CANCER RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 caselgktsntfc 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CASELGKSTNTFC 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11;
                     Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                  /note= "This bond cyclises the peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90.3%;
                            Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 65; DB 22; Length 13; Pred. No. 0.00016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                              Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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WPI; 2001-442248/47.

Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -

Example 25; Page 47; 102pp; English.

commoncyclic peptides, dimeric bicyclic peptides (comprising 2 linked commoncyclic peptides) and a cyclic peptide with at least one amino acid commoncyclic peptides) and a cyclic peptide with at least one amino acid commoncyclic peptides) and a cyclic peptide with at least one amino acid composed prior to cyclisation are used to interfere with anglogenesis, composed prior to cyclisation are used to interfere with anglogenesis, composed prior to cyclisation or lymphangiogenesis in a mammal with a condition composed prior to compose the condition or lymphangiogenesis. Composed prior to benign tumour, post-recovery composed prior vascular accident, post-angioplasty restenosis, head, heat or cold crembrovascular accident, post-angioplasty restenosis, head, heat or cold crembrovascular accident, post-angioplasty restenosis, head, heat or cold crembrovascular dysfunction, diabetes induced neovascular sequelae, or chronic liver composed prior c a peptide loop and cyclising The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring better the contraction of producing a monomeric monocyclic peptide by a measuring beta-beta chronic inflammation, especially rheumatoid arthritis, psoriasis and diabetic retinopathy. a-beta carbon separation distances on opposite antiparallel strands eptide loop fragment from an exposed loop of a growth factor protein cyclising the peptide by oxidising the cysteine residues. The

Matches Query Match Local Similarity 1 CASELGKSTNTFC 13 Conservative 90.3%; Score 65; DB 22; Pred. No. 0.00016; 2; Mismatches 0 0; Length 13; 0;

Gaps

0;

Sequence

13 AA;

AAU04547 RESULT œ DЬ Ş

1 caselgrstnsfc

AAU04547 standard; Peptide; 17

AAU04547;

26-SEP-2001 (first entry)

VEGF based bicyclic dimeric peptide #4.

neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; Human; VEGF; vascular endothelial growth factor; angiogenesis; diabetic retinopathy; chronic inflammation; cyclic.

Synthetic

Disulfide-bond Disulfide-bond /note= "This bond cyclises the peptide" 17Location/Qualifiers

/note= "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form a dimeric.peptide"

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RESULT
AAU04549
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The sequence represents a dimeric bicyclic peptide of the invention, CC whose 3-dimensional structure is modelled on the expose loop of human CC vegFD (vascular endothelial growth factor). The invention relates to a composition of the composition of the composition of the cyclist of the peptide by a measuring comethod of producing a monomeric monocyclic peptide by a measuring composition and cyclisting the peptides of a growth factor protein cyclising the peptides of a growth factor protein cyclising the peptides of a growth factor protein cyclising the cyclic peptides (comprising 2 linked cyclic peptides) and a cyclic peptides (comprising 2 linked cyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, convascularisation or lymphangiogenesis, neovascularisation or lymphangiogenesis.

CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.

CC characterised by angiogenesis, neovascularisation or lymphangiogenesis.

CC characterised by angiogenesis, neovascularisation, post-recovery crebrovascular accident, post-angioplasty restenosis, head, heat or cold hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascularisation of the liver, excessive sequelae, hypertension induced neovascular sequelae, or chronic liver in a mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, accumulation characterised by fluid care also used to made blood vessels and lymphatic vascular least one biological activity induced by VEGF, VEGF-C or -D and chronic inflammation, especially rheumatoid arthritis, psoriasis and care used to composition and arthritis, psoriasis and composition and composition characterised by fluid chronic inflammation, especially rheumatoid arthritis, psoriasis and care to the composition and care the composition and care the c
                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
    VEGF based bicyclic dimeric peptide #6.
                                                                                                                                     AAU04549 standard; Peptide; 17 AA
                                                  26-SEP-2001 (first entry)
                                                                                                       AAU04549;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JAN-2000; 2000US-0176293
16-MAY-2000; 2000US-0204590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JAN-2001; 2001WO-US01533
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   17 AA;
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                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                          90.3%;
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                                                                                                                                                                                                                                                                                                                              Score 65; DB 22;
Pred. No. 0.00021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cendron A;
                                                                                                                                                                                                                                                                                                                                                                        DB 22; Length 17;
                                                                                                                                                                                                                                                                                                                              0;
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1 CASELGKSTNTFC 13

Query Match Best Local S Matches 11

Similarity

90.3%;

Score 65; DB 22; Pred. No. 0.00021; 2; Mismatches 0

DB 22; Length 17;

0,

Gaps

0

Conservative

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XXX FT FT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cerebrovascular accident, post-angioplasty restenosis, head, head or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, vasculature. The monomeric and bicyclic peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammatory agent, to treat a
                                                                                                                                                                                                                                                                                        beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition the condition is diabetic retinopathy, psoriasis, arthropathy, post-recovery hemangioma, vascularised malignant or bear attributed.
Sequence
                                             chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequence represents a dimeric bicyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-442248/47.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; VEGF; vascular endothelial growth factor; anglogenesis; neovascularisation; lymphanglogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JAN-2001; 2001WO-US01533
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disulfide-bond
                                     retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hughes RA,
A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note- "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a dimeric peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "This bond cyclises the peptide'
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                                                                                                                 CC WEGFD (vascular endothelial growth factor). The invention relates to a CC VEGFD (vascular endothelial growth factor). The invention relates to a CC method of producing a monomeric monocyclic peptide by a measuring CC extended to producing a monomeric monocyclic peptide by a measuring CC a peptide loop fragment from an exposed loop of a growth factor protein CC and cyclising the peptide by oxidising the cysteine residues. The CC monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked CC monocyclic peptides) and a cyclic peptide with at least one amino acid CC monocyclic peptides) and a cyclic peptide with at least one amino acid CC clear prior to cyclisation are used to interfere with angiogenesis, CC characterised by angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition CC characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold ctrauma, substance-induced moovascularisation of the liver, excessive hormone-related annionation dvsfinnction. diabetes induced moovascularisation of the liver, excessive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU04551 standard; Peptide; 17 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF based bicyclic dimeric peptide #8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-442248/47.
hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic
                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence represents a dimeric bicyclic peptide of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "A disulfide bond forms between residue
17 and residue 1 of the sequence appearing as AAU04528,
forming a dimeric peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note= "This bond cyclises the peptide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stacker S,
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; VEGF; vascular endothelial growth factor; anglogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
         The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition neovascularisation or lymphangiogenesis in a mammal with a condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diabetic retinopathy; chronic inflammation; cyclic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU04536;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU04536 standard; Peptide; 13 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VEGF based monocyclic peptide 14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200152875-AJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disulfide-bond
                                                                                                                                                                                                                                                                                                                     Novel monomeric monocyclic peptide, used to interfere with
                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                            Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                            (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                  oxidizing the cysteine residues
                                                                                                                                                                                                                                                                             angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
characterised by angiogenesis, neovascularisation or lymphangiogenesis
                                                                                                                                                                                                                                Example 25; Page 47; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 caselgrstnsfc 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CASELGKSTNTFC 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17 AA;
                                                                                                                                                                                                                                                                                                                                                                                            Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "This bond cyclises the peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90.3%;
                                                                                                                                                                                                                                                                                                                                                                                              Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 65; DB 22;
Pred. No. 0.00021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                  Cendron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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RESULT 12
AAU04548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The condition is diabetic retinopathy, psoriasis, arthropathy, chemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive concerns the properties of the constant of the liver, excessive concerns the populate anglogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver conficulation, the peptides are also used to modulate vascular permeability concumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, cor brain. The peptides are used to image blood vessels and lymphatic cor brain. The peptides are used to image blood vessels and lymphatic constitute. The monomeric and bicyclic peptides are used to interfere cuth at least one biological activity induced by VEGF, VEGF-C or -D and chronic inflammation, especially rheumatoid arthritis, psoriasis and
Novel monomeric monocyclic peptide, used to interfere with angiagenesis, or lymphangiogenesis, is produced by cyclising a loop fragment from an exposed loop of a growth factor protein b oxidizing the cysteine residues -
                                                                                                                                                                                                                                                                         18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                WPI; 2001-442248/47.
                                                                                                                                                                                    Achen MG,
                                                                                                                                                                                                                        (LUDW-) LUDWIG INST CANCER RES.
                                                                                                                                                                                                                                                                                                                                                 18-JAN-2001; 2001WO-US01533.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diabetic retinopathy; chronic inflammation; cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; VEGF; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VEGF based bicyclic dimeric peptide #5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU04548 standard; Peptide; 17 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU04548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 casdvgkstntwc 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CASELGKSTNTFC 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                              Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "This bond cyclises the peptide'
17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17 and residue 17 of an identical peptide to a dimeric peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
1..13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "A disulfide bond forms between residue 17 and residue 17 of an ideation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.78;
                                                                                                                                                                         Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 61; DB Pred. No. 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.00075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 22; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                      peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cold
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В S

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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
WPI; 2001-442248/47
                                   Achen MG,
                                                                                                    18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                  (LUDW-) LUDWIG INST CANCER RES.
                                                                                                                                                          18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                               26-JUL-2001.
                                                                                                                                                                                                                                  WO200152875-A1
                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                          neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation.
                                                                                                                                                                                                                                                                                                                                        Human; VEGF-D; vascular endothelial growth factor; anglogenesis;
                                                                                                                                                                                                                                                                                                                                                                                 Human VEGF-D amino acids Vall01-Thr 173.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU04522 standard; protein; 73 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                      26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU04522;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The sequence represents a dimeric bicyclic peptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 casdvgkstntwc 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CASELGKSTNTFC 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                 Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84.7%;
76.9%;
                             Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 98 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 61; I
Pred. No. 0
                           Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 22;
0.001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
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0;

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AAU04520
ID AAUU
XX
AC AAUC
AC AAUC
AC AG
DF Huma
XX
KW Huma
KW Giak
KW Giak
KW diak
KW diak
XX
Home
XX
DS Home
XX
PR 18---
PR 18---
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anglogenesis, neovascularisation or lymphangiogenesis. The condition is cdiabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised cmalignant or benign tumour, post-recovery cerebrovascular accident, cc malignant or benign tumour, post-recovery cerebrovascular accident, cc post-angloplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic cdysfunction, diabetes induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a cc condition characterised by fluid accumulation in peripheral limbs or in clings, peritoneal cavity, pleura, or brain. The peptides are used to interfere with at least one biological activity conducted by VEGF, VEGF, or D and are also used in combination with an canti-inflammatory agent, to treat a chronic inflammation, especially conducted arthritis, psoriasis and diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence represents Human VEGF-D (vascular endothelial growth factor) amino acids VallO1-Thr 173, used together with the C-terminal 23 residues of VEGF to make a hybrid theoretical molecule for 3 dimensional modelling. The sequence is used in a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU04520 standard; protein; 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; Page 90-91; 102pp; English.
                                                                                                                                                                                                                                     diabetic retinopathy; chronic inflammation
                                                                                                                                                                                                                                                           diabetes
                                                                                                                                                                                                                                                                                  neovascularisation;
                                                                                                                                                                                                                                                                                                      Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                               Human VEGF-D amino acids Vall01-PR0186
                                                                                                                                                                                                                                                                                                                                                                                         26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU04520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by
  18-JAN-2000;
16-MAY-2000;
                                                            18-JAN-2001; 2001WO-US01533
                                                                                                           26-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match 75.0%; S. Local Similarity 100.0%; les 11; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 aselgkstntf 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 ASELGKSTNTF 12
                                                                                                                                                                                                                                                              induced neovascular
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  2000US-0176293
2000US-0204590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA,
                                                                                                                                                                                                                                                           lymphangiogenesis; psoriasis; tumour; ovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Score 54; DB
%; Pred. No. 0.0
0; Mismatches
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF. Cor -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic neovascularisation of the liver, excessive hormone-related angiogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acids vall01-PRO186. The sequence is used in a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequence represents Human VEGF-D (vascular endothelial growth factor)
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                                       08-JUL-1999.
                                                                                                                                                               tumour; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
wound healing; lymphedema; scleroderma; anhydrotic ectodermal dysplasia
                                                                                                                                                                                                       Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
                                                                                                                                                                                                                                                    Human vascular endothelial growth factor (VEGF)-D
                                                                                                                                                                                                                                                                                              21-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                AAY23889 standard; Protein; 109
                                                                               WO9933485-A1
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100.0%; Pr
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Pred. No.
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0.096;
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Gaps

0;

23-DEC-1998;

98WO-US27373

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                                                                                                                                                                                                                          CC The present sequence represents human vascular endothelial growth CC factor (VEGF)-D. The specification describes a human cell line CC which stably expresses VEGF-D, or fragments/analogues having VEGF-D CC biological activity. VEGF-D antagonists, e.g. antisense nucleic acids CC or triplex DNA, VEGF-D variants or antibodies (especially chimeric CC antibodies), are useful for the treatment or alleviation of malignant CC enlanomas, tumours or psoriasis. Anglogenesis and lymphanglogenesis stimulating amounts of VEGF-D can be administered to enhance the CC acceptance and/or healing of skin grafts or to stimulate the healing CC stimulating amounts of VEGF-D can be used to treat lymphedema. CC Endothelial proliferation stimulating amounts of VEGF-D can be used to treat scleroderma. Vascularisation stimulating amounts of VEGF-D can CC useful for detecting tumours expressing VEGF-D. Fully processed VEGF-D can be used to stimulate at least one VEGF-D. Fully processed VEGF-D can be used to stimulate at least one VEGF-D bloactivity chosen from CC endothelial cell proliferation, migration, survival and differentiation can defend the substitution without inducing vascular permeability.
                                                                             Query Match 75.0%; Score 54; DB 20; Length 109; Best Local Similarity 100.0%; Pred. No. 0.11; Matches 11; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                 Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A human cell line stably expressing vascular endothelial growth factor D, useful for treating melanomas or tumours expressing VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-405368/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Achen MG, Alitalo K, Stacker SA;
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24-DEC-1997;
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29 aselgkstntf 39
                      2 ASELGKSTNTF 12
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97AU-0001131.
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Search completed: June 17, 2002, 16:02:11 Job time: 420 sec

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OM protein - protein search, using sw model
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Maximum DB seq length: 2000000000
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Maximum Match 10
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1: /cgn2_6/ptodata/2/
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Listing first 45 summaries
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  GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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    US-08-915-795-3
US-08-915-795-5
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US-08-93-911-2
US-08-283-971-1
US-08-283-971-1
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US-08-467-955-2
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US-08-875-811-26
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9 064/42983	5795  R  FACTOR  FACTO	08-875-811-64 08-875-811-51 08-875-811-43 08-875-811-43 08-889-8418-12 08-889-8418-12 08-889-8418-2 09-069-619-2 09-069-619-2 09-199-637A-295 08-857-076-92 08-857-076-92 09-257-490-12 09-257-490-12 07-956-483-15 -08-472-240A-6 0-472-240A-6 0-472-240A-6 0-199-31703-75
	an P.L.C.	Sequence 54, 15 Sequence 55, 16 Sequence 12, 16 Sequence 12, 17 Sequence 2, 18 Sequence 2, 18 Sequence 2, 18 Sequence 2, 18 Sequence 62, 18 Sequence 62, 18 Sequence 20, 18 Sequence 15, 18 Sequence 17, 18 Sequence 18, 18 Se
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Query Match Best Local Similarity

75.0%;

Score 54; DB 4; Pred. No. 0.079;

Length 325;

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Matches

11;

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US-08-915-795-9
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                                                                             Sequence 9, application US/08915795
Patent No. 6235713
GENERAL INFORMATION:
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: Sequence 5, Application US/08915795

: Patent No. 6235713
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:

NAME: EVANS, Joseph D.

REGISTRATION NUMBER: 26,269

REFERENCE/DOCKET NUMBER: 1064

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
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                                                APPLICANT:
                 APPLICANT:
                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                        ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein HYPOTHETICAL: NO
                                                                                                                                                                                     121 ASELGKSTNTF 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WII
APPLICANT: Steven A. STI
APPLICANT: Kari ALITALO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: si
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                                                                                                                                                                                                                                                                                                                                                                                                                                          354 amino acids
                                                              Marc G. ACHEN
                 Kari ALITALO
                            Andrew F. WILKS
Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                               SS: Single
linear
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Steven A. STACKER
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100.0%; Pred. No.
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                                                                                                                                                                                                                                       DB 4; Length 354; . 0.086; ches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
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                                                                                                                                                                                                                                         0,
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                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                     Sequence 8, Application US/08915795 Patent No. 6235713
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: N/A
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: line
MOLECULE TYPE: p
ORIGINAL SOURCE:
TISSUE TYPE: M
                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                       APPLICANT: KARI ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                    APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILL
APPLICANT: Steven A. STAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION UMBER: 26,269
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                             121 ASELGKTTNTF 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                    COUNTRY:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: GROWTH FACTOR NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
              APPLICATION NUMBER:
                                                                                                                                                          STATE:
                                                                                                                                                                          ADDRRSSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C. STREET: 1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 ASELGKSTNTF 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
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                                                                                                                           20005
                                                                                                                                                                  Washington
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                                                                                                                                                                                                                                                                        Andrew F. WILKS
Steven A. STACKER
                                                                                                                                    United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   321 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Evenson, McKeown, Edwards & Lenahan P.L.L.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (202)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mouse Lung
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              US/08/915,795
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MOLECULE TYPE: protein
ORIGINAL SOURCE:
TISSUE TYPE: Mouse Lung
US-08-915-795-8
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US-08-875-811-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,
                                  TELEFAX: (415) 576-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Rybak, Susanna M.
APPLICANT: Newton, Dianne L.
APPLICANT: Boque, Lluis
APPLICANT: Wlodawer, Alexander
TITLE OF INVENTION: Recombinant Ribonuclease Proteins
NUMBER OF SEQUENCES: 64
                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                           FILING UMALL. 435
CLASSIFICATION DATA:
PRIOR APPLICATION UNMBER: WO PCT/US97/02588
APPLICATION NUMBER: 19-FEB-1997
                                                                                                                                                         FILING DATE: 19-FEB-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/011,800
FILING DATE: 21-FEB-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/875,811 FILING DATE: 19-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126 ASELGKTTNTF 136
                                                                                   NAME: Faris, Susan K.
REGISTRATION NUMBER: 41,739
REFERENCE/DOCKET NUMBER: 01:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity hes 10; Conservat
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               SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: San Francisco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP:
                                                                     TELEPHONE:
LENGTH: 83 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
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                                  (415) 576-0200
415) 576-0300
8 SEQ ID NO: 2:
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90.9%;
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                                                                                                            015280-244100US
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Pred. No. 0.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
US-08-875-811-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/08283971 Patent No. 5529775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                TELEX: No. 5529775 Applicable INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.24
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ardelt Ph.D, Wojciech J. APPLICANT: Mikulski, Stanislaw M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435 PRIOR APPLICATION DATA:
FRAGMENT TYPE:
ORIGINAL SOURCE:
                                      MOLECULE TYPE: HYPOTHETICAL:
                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                       TELECOMMUNICATION INFORMATION: 718-625-0399
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                         ANTI-SENSE: N
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60 CKYKLKKSTNKFC 72
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les 8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Brooklyn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                  THE EFAX: 718-625-0399
                                                                                                                                                                                                             NAME: Jay, Mark H. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                TOPOLOGY:
                                                                              STRANDEDNESS:
                                                                                                        LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                        104 amino acids
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                                          z
               N-terminal
                                                    protein
                                                                                single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Rana clone 9 peptide from Rana
pipiens genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jay, P.C
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    Mismatches

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Query Match
Best Local Similarity
Thes 8; Conserv
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; DEVELOPMENTAL STAGE: En
US-08-283-971-I
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US-07-921-619-1
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TELEX: No. 5595734 Applicable
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/07921619 Patent No. 5595734
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                   FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 07/178,118
FILING DATE: 06-APR-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/436,141
FILING DATE: 13-NOV-1989
                                                                                                                                                    ANTI-SENSE:
                                                                                                                                                           HYPOTHETICAL:
                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                              NAME: Jay, Mark H.
REGISTRATION NUMBER: 27507
REFERENCE/DOCKET NUMBER: 50
TELECOMMUNICATION INFORMATION:
TELEPHONE: 718-625-0399
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 0
FILING DATE: 13-NOV-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ardelt Ph.D, Wojciech J.
APPLICANT: Mikulaki, Stanislaw M.
TITLE OF INVENTION: PHARMACEUTICAL FOR TREATING TUMORS IN HUMANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                         ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: LEM ... PC-DUS/NU ... OPERATING SYSTEM: PC-DUS/NU ... Patentin Release #1.24
                                                                                           DEVELOPMENTAL STAGE:
                                                                                                                                                                                    STRANDEDNESS: si
                                                                                                                                                                                                                  TYPE: AMINO ACID
                                                                                                                                                                                                                                                                     TELEPHONE: 718-020
TELEPHONE: 718-625-0399
TELEFAX: 718-625-0399
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                                                                                                                                                                                                                                LENGTH:
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                                                                                                                                                                                                                         104 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Mark H. Jay, P.C.
P.O. Box 020083, General Post Office
           Conservative
                                                                                                                                                 z
                                                                                                     Rana pipiens
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                                                                                                                                                           N protein
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                                                                                                                                  N-terminal
                                                                                                                                                                                                  single
                     59.7%; Score 43; DB 1; 61.5%; Pred. No. 1.8;
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61.5%;
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Pred. No.
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                                Length 104;
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US-08-467-955-1
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                                                                                      Query Match
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                                                                                                                                                                                                                                                                                                                                TELEPANE: 201-912-9066
TELEFAX: 201-912-0442
TELEX: NO. 5728805 Applicable
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                            FRAGMENT TYPE: N-terminal ORIGINAL SOURCE: ORGANISM: Rana pipiens
                                                                                                                                                                                                                                                                                                                                                                                                                                   PILING DATE: 03-FEB-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/283,970
FILING DATE: 01-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Jay, Mark H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 104 amino acids
                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 50
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-912-9066
                                                                                                                                                                                                            ANTI-SENSE:
                                                                                                                                                                                                                        HYPOTHETICAL:
                                                                                                                                                                                                                                        MOLECULE TYPE:
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APPLICATION NUMBER: US 0
FILING DATE: 13-NOV-1989
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APPLICATION NUMBER:
FILING DATE: 03-FEB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 06-APR-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.24 CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
75 CKYKLKKSTNKFC 87
                                                                                                                                            ORGANISM: Rana pipiens
DEVELOPMENTAL STAGE: OR
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                1 CASELGKSTNTFC 13
                                                                        Local
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                                                                                                                                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                         TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/467,955 FILING DATE:
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STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
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                                                         Similarity
8; Conserv
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Short Hills
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                                                    Conservative
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SYSTEM: PC-DOS/MS-DOS
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О. Box E
                                                                                                                                                                                                                                                                   single
                                                                      59.7%;
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                                                    1; Mismatches
                                                                    Score 43; DB 1; Length 104; Pred. No. 1.8;
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US-08-467-955-2
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Patent No. 5728805
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; Sequence 13, Application US/08891848
                    US-08-891-848-13
                                    RESULT
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APPLICANT: Ardelt Ph.D, Wojciech J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 07/178,118
ETILING DATE: 06-APR-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/436,141
FILING DATE: 13-NOV-1989
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 07/814,332
APPLICATION UNMBER: US 07/814,332
FILING DATE: 03-FEB-1992
PRIOR APPLICATION DATA:
15.06/283 970
                                                                                                                                                  Matches
                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: No. 5728805 Applicable INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: PHARMAČEUTICALS AND METHOD FOR MAKING THEM NUMBER OF SEQUENCES: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 01-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Jay, Mark H.
REGISTRATION NUMBER: 27507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 50
TELECOMMUNICATION INFORMATION: 201-912-9066
                                                                                                                                                                                                                                                                               FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: P.O. BOX E
CITY: Short Hills
STATE: New Jersey
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                                                                                                                                                  Local Similarity nes 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                               ORGANISM: Rana pipiens
DEVELOPMENTAL STAGE: OG
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                                                                                     75 CKYKLKKSTNKFC 87
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                                                                                                                                                     Conservative
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01-AUG-1994
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                                                                                                                                                                      Score 43; DB Pred. No. 1.8;
                                                                                                                                                          Mismatches
                                                                                                                                                                                        DB 1;
                                                                                                                                                                                        Length 104;
                                                                                                                                                          4; Indels
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APPLICANT:

Rybak, Susanna M.

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                                                    RESULT 11
US-08-875-811-1
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Sequence 1, Application US/08875811 Patent No. 6045793 GENERAL INFORMATION:
                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                  Matches
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PRIOR APPLICATION NUMBER: US 07/
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/
APPLICATION NUMBER: US 07/
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APPLICANT: Nicholls, Peter J.
TITLE OF INVENTION: Selective RNase Cytotoxic Reagents
NUMBER OF SEQUENCES: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Rybak, APPLICANT: Youle,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 32,762
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEPAY. (415) 576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 20-APR-1990
ATTORNEY/AGENT INFORMATION:
NAME: Weber, Ellen Lauver
REGISTRATION NUMBER: 32,70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 22-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 04-FEB-1993
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APPLICATION NUMBER: U
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                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
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CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
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                                                                                                                                                                                                                                                                                LOCATION: 1..104
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                               Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                               NAME/KEY: Protein LOCATION: 1..104
                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
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                                                                                                                    75 CKYKLKKSTNKFC 87
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SYSTEM: PC-DOS/MS-DOS
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61.5%;
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    Mismatches

                                                                                                                                                                                                     Score 43; DB 2;
Pred. No. 1.8;
                                                                                                                                                                                                                        Length 104;
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В
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; OTHER INFORMATION: /note= "Xaa = pyroglutamic acid" US-08-875-811-1
                                                                                   GENERAL INFORMATION:
                                                                                                   Sequence 1, Application US/09394268 Patent No. 6175003
                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                        Query Match
            APPLICANT: Saxena, Shailendra K
TITLE OF INVENTION: NUCLEIC ACIDS ENCODING RIBONUCLEASES AND METHODS OF
FILE REFERENCE: 5013
CURRENT APPLICATION NUMBER: US/09/394,268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 576-030
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: Protein LOCATION: 1.104 OTHER INFORMATION: OTHER INFORMATION: OTHER INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US97/02588
FILING DATE: 19-FEB-1997
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Faris, Susan K.
REGISTRATION NUMBER: 41,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Re
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                      75 CKYKLKKSTNKFC 87
                                                                                                                                                                                                                                                                                      Local Similarity
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                                                                                                                                                                                                                                    1 CASELGKSTNTFC 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Boque, Lluis
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                                                                                                                                                                                                                                                                                   59.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                       /label= nOnc
/note= "native ONCONASE (Registered
Trademark) from Rana pipiens"
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Pred. No. 1
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US-08-875-811-24
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                                                                                                                                                                                                                                                                                        Sequence 24, Application US/08875811 Patent No. 6045793
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/394,268
CURRENT FILING DATE: 1999-09-10
NUMBER OF SEQ ID NOS: 8
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 2
LENGTH: 104
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
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NUMBER OF SEQ ID NOS: 8
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 1
LENGTH: 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Saxena, Shailendra K
TITLE OF INVENTION: MUCLEIC ACIDS ENCODING RIBONUCLEASES AND METHODS OF
TITLE OF INVENTION: MAKING THEM
FILE REFERENCE: 5013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                 APPLICANT: Rybak, Susanna M. APPLICANT: Newton, Dianne L. APPLICANT: Boque, Lluis APPLICANT: Wlodawer, Alexander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: SEQ ID NO:1 with Leu at position 23 and Cys at OTHER INFORMATION: position 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                           CITY: San Francisco
STATE: California
                                                                                                                                       STREET:
                                                                                         COUNTRY:
                                                                           ZIP:
                                                                                                                                                           ADDRESSEE:
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                                                                           94111-3834
                                                                                                      California
                                                                                                                              Two Embarcadero Center, Eighth Floor
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                                                                                                                                                                                     Recombinant Ribonuclease Proteins 64
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61.5%;
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Pred. No.
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Pred. No. 1.8;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Faris, Susan K. 41,739
REGISTRATION NUMBER: 41,739
REFERENCE/DOCKET NUMBER: 015280-244100US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEPAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 24:
SEQUENCE CHARACTERISTICS:
LENGTH: 105 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
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APPLICATION NUMBER: WO PCT/US97/02588
FILING DATE: 19-FEB-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/011,800
FILING DATE: 21-FEB-1996
ATTORNEY/AGENT INFORMATION:
NAME: Faris, Susan K.
REGISTRATION NUMBER: 41,739
REFERENCE/DOCKET NUMBER: 015280-244100US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/US97/02588
FILING DATE: 19-FEB-1997
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 60/011,800 FILING DATE: 21-FEB-1996 ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                              ZIP: 94111-3834

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC-DOS/MS-DOS
COPUTABLE. Details PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Rybak, Susanna M.
APPLICANT: Newton, Dianne L.
APPLICANT: Boque, Lluis
APPLICANT: Wlodawer, Alexander
TITLE OF INVENTION: Recombinant Ribonuclease Proteins
NUMBER OF SEQUENCES: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein
                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION UNLER: US/08/875,811 FILING DATE: 19-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 61.5%; hes 8; Conservation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 76 CKYKLKKSTNKFC 88
                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
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o. 6045793
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
           015280-244100US
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Search completed: June 17, 2002, 15:56:35 Job time: 84 sec
                                                                                                                        Query Match
Best Local Similarity
Watches 8; Conserve
                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 576-0200 TELEPAX: (415) 576-0300 INFORMATION FOR SEQ ID NO: 26:
                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 105 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                             76 CKYKLKKSTNKFC 88
                                                                                            1 CASELGKSTNTEC 13
                                                                                                                                       Conservative
                                                                                                                                                       59.7%;

    Mismatches

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OM protein - protein search, using sw model
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                          283138 seqs, 96089334 residues
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Listing first 45 summaries
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pir2:*
              pir3:*
pir4:*
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# SUMMARIES

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

24 25 26 27 28 29	4 4 5 5 5 5 6 6 6 7 7 7 10 11 11 11 11 11 11 11 11 11 11 11 11	Result No.
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$\alpha \circ \alpha \mapsto \alpha \circ \alpha$	vascular endotheli vascular endotheli ca2+-transporting polyketide synthas hypothetical prote probable nucleopor probable cation ef cytochrome P450 ib L-aspartate oxidas retinoblastoma bin vascular endotheli glioma-derived vas vascular endotheli probable antigenic transcription init LPS biosynthesis R glioblastoma RING laminin beta-1 cha hypothetical prote vascular endotheli vascular endotheli vascular endotheli vascular endotheli	Description  vascular endotheli  vascular endotheli  ovine vascular end

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1 CNEESLIC 8

Query Match
Best Local Similarity
6; Conserv

Conservative

1; Mismatches

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78.3%; 75.0%;

Score 36; DB 2; Length 133; pred. No. 12;

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JH0151 513588 716558 7165781 517781 527781 52268 533066 533066 538346 715416 AF0118 AF0118 AF0118 AF0118 AF0118 AF0118	н87486
malate dehydrogena malate dehydrogena hypothetical prote malate dehydrogena hypothetical prote probable kinase rp hypothetical prote glycosyltransferas hypothetical prote protein F23B2.4 [1	1-deoxy-D-xylulose

## ALIGNMENTS

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vascular endothelial growth factor (version 1) - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 16-Mar-1990 #sequence_revision 16-Mar-1990 #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Tischer, E.; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Schilling, J.; Lau, K. Biochem. Biochys. Res. Commun. 165, 1198-1206, 1989
A;Title: Vascular endothelial growth factor: a new member of the platelet-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:M33750; NID:g163810; PIDN:AAA30805.1; PID:g163811 C;Keywords: alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Reference number: A33787; MUID:90121225
A; Accession: A33787
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A; Residues: 1-120 <TIS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: preliminary
                                                                                                                                                                                                                                                                                         Дd
A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-133 <LYT>
A;Residues: 1-133 <LYT>
A;Cross-references: GB:S67520; NID:g456897; PIDN:AAB29220.1; PID:g456899
A;Note: sequence inconsistent with nucleotide translation
A;Note: sequence extracted from NCBI backbone (NCBIN:141420, NCBIP:141425)
                                                                                                                                                                                            R;Lyttle, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.; Robinson, A.J. J. Virol. 68, 84-92, 1994
A;Title: Homologs of vascular endothelial growth factor are encoded by the poxvi A;Reference number: A49530; MUID:94076465
                                                                                                                                              A; Accession: B49530
                                                                                                                                                                             A; Contents: NZ2
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 CNDESLEC 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78.3%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 36; DB 2;
Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 120;
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A; Molecule type: protein
A; Kesidues: 27-31 <FER>
C; Keywords: alternative splicing; glycoprotein
F; 1-26/Domain: signal sequence #status predicted <SIG>
F; 27-190/Product: vascular endothelial growth factor #s
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د
                                                                                                                                                                                                                                                                                                                                                    R;Ferrara, N.; Henzel, W.J.
Biochem. Biophys. Res. Commun. 161, 851-858, 1989
A;Title: Pituitary follicular cells secrete a novel heparin-binding growth factor speci.
A;Reference number: A33255; MUID:89286596
                                                                                                                                                                                              F;100/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 27-190 <TIS>
A;Cross-references: GB:M31836; NID:g163808; PIDN:AAA30804.1; PID:g163809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross references: GB.M32976; NID:g163006; PIDN:AAA30502.1; PID:g163007 R; Tischer, E; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Schilling, J.; Lau, K.; Crisp Blochem. Biophys. Res. Commun. 1065, 1198-1206, 1989 A; Title: Vascular endothelial growth factor: a new member of the platelet-derived growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A:Reference number: A33787; MUID:90121225
A:Accession: B33787
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A; Residues: 1-190 <LEU>
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Science 246, 1306-1309,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C:Species: Bos primigenius taurus (cattle) c;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Nov-1999 C:Accession: B40080; B33787; A33255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Reference number: A40080; MUID:90069608
A;Accession: B40080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Title: Vascular endothelial growth factor is a secreted angiogenic mitogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vascular endothelial growth factor precursor (version 2) - bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:X89506; NID:g899350; PIDN:CAA61677.1; PID:g899351
                                                                                                    Matches
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A; Residues: 1-146 < RED>
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                                                 1 CNEESLIC 8
86 CNDESLEC 93
                                                                                                                      Local Similarity
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                                                                                                  6;
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306-1309, 1989
                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                 75.0%;
                                                                                                                              78.3%; Score 36;
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75.0%;
                                                                                                              Pred. No. 16;
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                                                                                     Mismatches
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                                                                                                                                                                                                                      growth factor #status predicted <MAT>
                                                                               1; Indels
                                                                                                                              Length 190;
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                                                                             0;
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                                                                             Gaps
                                                                          0;
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A; Molecule Type: DNA
A; Rosidues: 184-282; 382-850; 926-1115; 1409-1648; 1665-1761; 1876-2344; 2469-2560; 2609-; A; Residues: 184-282; 382-850; 926-1115; 1409-1648; 1665-1761; 1876-2344; 2469-2560; 2609-; R; Kunst, F; Ogasawara, N; Moszer, I; Albertini, A.M.; Alloni, G; Azevedo, V; E
C; Bron, S; Brouillet, S; Bruschi, C.V; Caldwell, B; Capuano, V; Carter, N.M.
A; Ehrlich, S.D; Emmerson, P.T; Entian, K.D; Errington, J; Fabret, C; Ferrari
A; Authors: Foulger, D; Fritz, C; Fujita, M; Fujita, Y; Fuma, S; Galizzi, A,; Gech, J; Harwood, C.R; Henaut, A; Hilbert, H; Holsappel, S; Hosono, S; Hullo, A; Authors: Lauber, D; Krogh, S; Kumano, M; Kurita, K; Lapidus, A,; Lardi
Y, M; Ogawa, K; Ogiwara, A,; Oudega, B; Park, S; Levine, A; Liu, H; Masuda, S; M
Rieger, M; Rivolta, C; Rocha, E; Roche, B; Rose, M; Sadaie, Y; Sato, T; Sca
A; Authors: Schleich, S; Schroeter, R; Scoffone, F; Sekiguchi, J; Sekowska, A;
T; Winters, P; Wipat, A; Yamamoto, H; Yamane, K; Yasumoto, K; Yata, K; Voshi
A; Title: The complete genome sequence of the Gram-positive bacterium Bacillus subti
A; Reference number: A69580; MUID:98044033
A;Cross-references: GB:Z99113; GB:AL009126; NID:g2634090; PIDN:CAB13602.1; PID:g263
                                                               A; Molecule type: DNA
A; Residues: 1-4427 < KUN>
                                                                                                           A; Status: nucleic acid sequence not shown; translation not shown
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A;Residues: 1-4427 <SCO>
A;Cross-references: EMBL:Z14098; NID:g40057; PIDN:CAA78479.1; PID:g40058
R;Scotti, C.; Piatti, M.; Cuzzoni, A.; Perani, P.; Tognoni, A.; Grandi, G.; Galizz
Gene 130, 65-71, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A:Reference number: PN0637; MUID:93345824
A:Accession: PN0637
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Scotti, C.; Piatti, M.; Cuzzoni, A.; Tognoni, A.; Grandi, G.; Galizzi, A.; Alber submitted to the EMBL Data Library, July 1992
A;Description: A Bacillus subtilis large ORF coding for a polypeptide highly simil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polyketide synthase pksL - Bacillus subtilis
C;Species: Bacillus subtilis
C;Date: 19-May-1994 #sequence_revision 06-Feb-1995 #text_change 03-Nov-2000
C;Accession: S25021; PN0637; B69679
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A;Residues: 1-1115 <MUR>
A;Cross-references: GB:X55197; NID:g10097; PIDN:CAA38982.1; PID:g10098
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A;Accession: A45761
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J. Cell Sci. 97, 487-495, 1990
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A; Experimental source: strain 168
C; Comment: This enzyme is composed of four synthase units. Unitl comprises beta-ketosynt acyl-carrier protein domains. Unitl comprises beta-ketosynthase, acyl-carrier protein an C; Genetics:
C; Genetics: pksx
A; Gene: pksL; pksx
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F;1410-1591/Domain: short-chain alcohol dehydrogenase homology <SAD1>
F;1436-2252/Domain: 3-oxoacyl-[acyl-carrier-protein] synthase I homology <OAS2>
F;1836-2255/Domain: acyl carrier protein homology <ACP1>
F;2626-2700/Domain: acyl carrier protein homology <ACP2>
F;2783-3181/Domain: 3-oxoacyl-[acyl-carrier-protein] synthase I homology <OAS3>
F;3576-3774/Domain: short-chain alcohol dehydrogenase homology <SAD2>
F;3852-3922/Domain: acyl carrier protein homology <ACP3>
F;3852-3922/Domain: acyl carrier protein homology <ACP3>
F;3992-4372/Domain: 3-oxoacyl-[acyl-carrier-protein] synthase I homology <OAS4>
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DNA Res. 4, 363-369, 1997

A:Title: Identification of open reading frames in Schizosaccharomyces pombe cDNAs. A; Reference number: 217323; MUID:98162722

A:Accession: 742421

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: mRNA

A;Molecule type: mRNA

A;Residues: 1-351 <YOS>
A;Cross-references: EMBL:D89145; NID:g1749497; PIDN:BAA13807.1; PID:g1749498

A;Experimental source: strain PR745
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                                                                                                                                                                                                                 submitted to the EMBL Data Library, December 1999
A; Reference number: 225034
A; Status. T. 10074
A; Status. T. 10074
                                                                                                                                                                                                                                                                                                                                                                                      probable nucleoporin [imported] - fission yeast (Schizosaccharomyces pombe) C;Specles: Schizosaccharomyces pombe C;Date: 09-Jun-2000 #sequence_revision 09-Jun-2000 #text_change 09-Jun-2000
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                                                                                                                A; Molecule type: DNA
A; Residues: 1-1778 <MCD>
A; Cross-references: EMBL: AL133357; PIDN: CAB62415.1;
A; Cross-references: EMBL: AL133357; PIDN: CAB62415.1;
A; Map position:
                         A; Gene: SPDB:SPAC1486.05
                                                                             A; Experimental source: strain 972h(-); cosmid c1486
                                                                                                                                                                                                    A; Status: preliminary; translated from GB/EMBL/DDBJ
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                                                             Genetics
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62.5%;
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72.7%;
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Pred. No. 3.7e+02;
1; Mismatches 2
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Pred. No. 53;
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                                                                                                                             GSPDB:GN00066; SPDB:SPAC1486.05
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M.; Ohfuku, Y.; Funahashi, T.; Tanaka, T.; Nuuvu, 1., N
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C;Species: Pyrococcus horikoshii
C;Date: 14-Aug-1998 #sequence_revision 14-Aug-1998 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Kawarabayasi, Y
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cytochrome P450 ib - rabbit
N;Contains: oxidoreductase (EC 1.-.-)
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 16-Jun-2000
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C;Superfamily: zinc transporter ZnT-2
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A;Experimental source: strain OT3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: H71078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Kikuta, Y.; Sogawa, K.; Haniu, M.; Kinosaki, M.; Kusunose, E.; Nojima, Y.; Yam: J. Biol. Chem. 266, 17821-17825, 1991
A;Title: A novel species of cytochrome P-450 (P-450-ib) specific for the small in A;Reference number: A40938; MUID:92011499
A;Accession: A40938
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                                                                                                                                                                      C;Superfamily: human cytochrome P450 CYP2D6; cytochrome P450 homology C;Keywords: chromoprotein; heme; iron; metalloprotein; oxidoreductase F;308-469/Domain: cytochrome P450 homology <CYP>F;447/Binding site: heme iron (Cys) (axial ligand) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Accession: A40938
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A; Residues: 1-501 <KIK>
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                                                                                                                                                                                                                                                                                                                                                                                                     C; Genetics
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Y.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; Kushida, N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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85.7%;
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pred. No. 2.1e+02;
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                                  Pred.
                                                                     Score 34;
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2 NEESLIC 8 

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Conservative

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Mismatches

B

297

NEENLIC 303

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A;Map position: 3q21-3qter
C;Superfamily: human retinoblastoma binding protein
                                                                                                                                                                                                                                                                                                                                                               Nature 352, 251-254, 1991
A;Title: Cloning of cDNAs for cellular proteins that bind to the retinoblastoma gene pro
A;Reference number: $16953; MUID:91312450
A;Accession: $16954
                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:S66431; NID:9435777; PIDN:AAB28544.1; PID:9435778 R;Defeo-Jones, D.; Huang, P.S.; Jones, R.E.; Haskell, K.M.; Vuocolo, G.A.; Hanobik, M.G. Nature 352, 251-254, 1991
                                                                                                                                                                                                                                                                                       A; Gene: GDB: RBP2
                                                                                                                                                                                                                                                                                                             A; Residues:
C; Genetics:
                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1102-1562, 'KKK' <DEF>
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A; Residues: 1-1722 <FAT>
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C;Date: 17-Mar-2000 #sequence_revision 17-Mar-2000 #text_change 17-Mar-2000
C;Accession: I78879; S16954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: I58383; MUID: 94020841 A; Accession: I78879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Characterization of the retinoblastoma binding proteins RBP1 and RBP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Fattaey, A.R.; Helin, K.; Dembski, M.S.; Dyson, N.; Harlow, E.; Vuocolo, G.A.; Hanobik
Oncogene 8, 3149-3156, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     retinoblastoma binding protein 2 - human
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N;Alternate names: protein T913_60
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 18-Aug-2000 #sequence_revision 18-Aug-2000 #text_change 02-Sep-2000
C;Accession: T51421
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A; Residues: 1-642 <SAT>
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A; Accession: T51421
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                                                                                                                          Matches
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Best Local :
                                     692 CNPERLYC 699
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                                                                                                                     Similarity
5; Conser
                                                                                                                   Conservative
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                                                                                                                                  Score 34; Pred. No.
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                                                                                                                 Mismatches
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1.1e+02;
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A35987
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R:Conn, G.; Bayne, M.L.; Soderman, D.D.; Kwok, P.W.; Sullivan, K.A.; Palisi, T.M.; Proc. Natl. Acad. Sci. U.S.A. 87, 2628-2632, 1990
A;Title: Amino acid and cDNA sequences of a vascular endothelial cell mitogen that A;Reference number: A35987; MUID:90207249
A;Accession: A35987
                                                                                                                                                                                                                              A;Cross-references: GB:M32167; NID:g204287; PIDN:AAA41211.1; PID:g204288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        glioma-derived vascular endothelial cell growth factor - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 16-Nov-1990 #sequence_revision 16-Nov-1990 #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-190 < CON>
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                                                                                                                                                                                                                                                                                                                           A; Status: preliminary
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A:Accession: A61029
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A; Residues: 1-116, 'ER',119-190 <CLA>
A; Cross-references: GB: M95200; NID: g202350; PIDN: AAA40547.1; PID: g202351
A; Note: sequence extracted from NCBI backbone (NCBIN: 110665, NCBIP: 110675)
R; Rosenthal, R.A.; Megyesi, J.F.; Henzel, W.J.; Ferrara, N.; Folkman, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: protein A; Residues: 27-38 < ROS>
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R:Claffey, K.P.; Wilkison, W.O.; Spiegelman, B.M.
J. Biol. Chem. 267, 16317-16322, 1992
A:Title: Vascular endothelial growth factor. Regulation by cell differentiation A:Reference number: A43351; MUID:92355593
A:Accession: A43351; MUID:92355593
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: embryo
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A;Cross-references: GB:S38100; NID:g249860; PIDN:AAB22254.1; PID:g249861
A;Cross-references: GB:S38100; NID:g249860; PIDN:ABB22254.1; PID:g249861
A;Cross-references: GB:S38100; NID:g249860; PIDN:ABB22254.1; PID:g249861
A;Cross-reference extracted from NCBI backbone (NCBIN:107624, NCBIP:107625)
A;Clauss, M.; Gerlach, M.; Gerlach, H.; Brett, J.; Wang, F.; Familletti, P.C.; Pan, Y.C.
J. Exp. Med. 172, 1535-1545, 1990
A;Title: Vascular permeability factor: a tumor-derived polypeptide that induces endothel A;Recession: A60932; MUID:91079755
A;Accession: A60932; MUID:91079755
A;Residues: 27-33 CCLA>
A;Molecule type: protein
A;Reference number: S52136; Mitsui, Y.; Wadhwa, R.
Biochim. Biophys. Acta 1224, 365-370, 1994
A;Title: Enhanced expression of multiple forms of VEGF is associated with spontaneous in A;Reference number: S52136; MUID:95101726
A;Accession: S52136; MUID:95101726
A;Accession: S52136; MUID:95101726
A;Residues: 27-46 (SUGS)
A;Residues: 27-46 (SUGS)
A;Residues: 27-46 (SUGS)
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N;Contains: vascular endothelial growth factor-2; vascular permeability factor
C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 08-Oct-1999
C;Accession: A44881; C44881; A60932; S52136
R;Breier, G.; Albrecht, U.; Sterrer, S.; Risau, W.
Development 114, 521-532, 1992
A;Ritle: Expression of vascular endothelial growth factor during embryonic angiogenesis
A;Reference number: A44881; MUID:92274860
A;Accession: A44881; MUID:92274860
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A; Experimental source: embryo
A; Note: sequence extracted from NCBI backbone (NCBIN:104677, NCBIP:104678)
A; Accession: C44881
A; Molecule type: mRNA
A; Residues: 1-140/209-214 <BR2>
A; Residues: 1-140/209-214 <BR2>
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A; Residues: 1-214 <BRE>
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Search completed: June 17, 2002, 15:58:20 Job time: 189 sec
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
protein search, using sw model
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1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
4: sp_inverteb
6: sp_mammal:*
7: sp_mhc:*
8: sp_organel:
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:
12: sp_virus:*
13: sp_virus:*
14: sp_unclass
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  Q9mzb1 ovis aries Q9nls1 capreolus c Q9nf3 orf virus. O42571 xenopus lae 077643 ovis aries O42572 xenopus lae Q95t10 drosophila Q9vff4 drosophila Q9vff4 plasmodium Q96j14 homo sapien p78796 schizosacch Q9utk4 schizosacch
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O97500 oryctolagus
O18843 oryctolagus
Q9n1s2 capreolus c
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Best Local Similarity 75.0
Matches 6; Conservative
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01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                        Kirkin V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J., Pepper M.S., Giannis A., Sleeman J.P.; Pepper M.S., Giannis A., Sleeman J.P.; "Characterization of indollnones which specifically inhibit VEGF-C-and VEGF-D-induced activation of VEGFR-3 but not VEGFR-2."; EUR. J. Biochem. 0:0-0(2001).

EMBL; AY032728; AAK96008.1; -. EMBL; AY032728; AAK96008.1; -. SEQUENCE 326 AA; 37106 MW; D7CAEBA6C9FABB7D CRC64;
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
O97500 PRELIMINARY;
097500;
01-MAY-1999 (TREMBLIEL 10,
01-MAY-1999 (TREMBLIEL 10,
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ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF; 1.
PROSITE; PS00249; PDGF; 1.
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O18843;
O1-JAN-1998 (TrEMBLrel. 05, Created)
O1-JAN-1998 (TrEMBLrel. 105, Last sequence update)
O1-JUN-2001 (TrEMBLrel. 17, Last annotation update)
O1-JUN-2001 (GRAGMENT).
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SEQUENCE
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"Sequential increases in capillarization and mitochondrial enzymes
low-frequency-stimulated rabbit muscle.";
Am. J. Physiol. 274:0810-0818(1998).
EMBL; AF022179; AAC15469.1; -.
EMBL; AF022179; AAC15469.1; -.
InterPro: IPR000072; PDGF.
InterPro: IPR000072; PDGF; 1.
SMART; SM00141; PDGF; 1.
SMART; SM00141; PDGF; 1.
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STRAIN-NEW ZEALAND WHITE; TISSUE-SKELETAL MUSCLE;
MEDLINE-981911144; PubMed-9530113;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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PROSITE; PS50278; PDGF_2; 1.
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Mammalia; Eutheria; Lagomorpha; Leporidae;
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Inoue K., Kawabe Y., Kodama T.;
"Rabbit VEGF cDNA,partial.";
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases
EMBL; AB020216; BAA36949.1; -.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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VASCULAR ENDOTHELIAL GROWTH FACTOR (FRAGMENT).
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nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                  6
                                                                                                                                                                                                                                                         75 AA;
                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68
                                                                                                                                                                                                                                                            8720 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7819 MW;
                                                                                                                       78.3%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  78.3%;
75.0%;
                                                                                    Score 36; DB
Pred. No. 2.1;
1; Mismatches
                                                                                                                                                                                                                                                  DDCE2C5B29E69359 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             687638661E98DEE0 CRC64;
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                                                                                                                                                   DB 6;
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1.9;
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                                                                                1,
                                                                                                                                               Length 75;
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                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                ;
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                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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       RESULT
Q9MZB1
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Q9N1S2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
Pfam; PF00341; PDGF;
                                                                                                                                                                                                 "Growth
                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-TESTIS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25 CNDESLEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
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Submitted (MAR-2000) to the EMBL; AF250375; AAF75258.1; HSSP; P15692; 1VPP. InterPro; IPR000072; PDGF.
                                                                                                                                                                                                                            Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                    Q9MZB1;
Q1-QCT-2000 (TremBLrel. 15,
Q1-QCT-2000 (TremBLrel. 15,
Q1-DEC-2001 (TremBLrel. 19,
VASCULAR ENDOTHELIAL GROWTH
                                                                                                                            TISSUE=PLACENTAL ARTERY ENDOTHELIUM;
Zheng J., Tsoi S.C., Magness R.R.;
                                                                                                                                                                                                            Mammalia; Eutheria; Ceta
Bovidae; Caprinae; Ovis.
NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Detection of growth factors in the testis of roe deer (Capreolus).";
Anim. Reprod. Sci. 64:65-75(2000).
EMBL; AF152593; AAF73232.1;
HSSP; P15692; 2VPF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROCETER PROCESS 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000072; PDGF. Pfam; PF00341; PDGF; 1. ProDom; PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O9NIS2 PRELIMINARY: PRT; 78 AA.
O9NIS2; O1-OCT-2000 (TrEMBLrel. 15, Created)
O1-OCT-2000 (TrEMBLrel. 15, Last sequence update)
O1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
VASCULAR ENDOTHELIAL GROWTH FACTOR ISOFORM 121 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Capreolus capreolus (Roe deer).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidea;

Cervidae; Odocoileinae; Capreolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-20532861; PubMed-11078967;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wagener A., Blottner S., Goritz F.,
                                                                                                    factor expression in ovine fetal placental artery
                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9131 MW;
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75.0%;
                                                         EMBL/GenBank/DDBJ databases
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Last annotation updat
FACTOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                       Created)
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Pred. No. 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          118 AA
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                                                                                                                                                                                                                                                                                                                                                        update)
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                                                                                                                                                                                                                                                  Pecora; Bovoidea;
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                                                                                                    endothelial
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RESULT
Q9YMF3
ID9YMF3
AC Q9
DT 01
DT 01
DT 0
DT 0
OS C
OC 1
OX
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Best Local S
Matches 6
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Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                 InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
                                  Q9YMF3;
01-MAY-1999 (TrEMBLrel. 10, C:
01-MAY-1999 (TrEMBLrel. 17, L:
01-JUN-2001 (TrEMBLrel. 17, L:
VASCULAR ENDOTHELIAL GROWTH F:
Orf virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProCom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
NON_TER 1 1
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-20532861; PubMed-11078967; Wagener A., Blottner S., Goritz F., "Detection of growth factors in the capreolus)."; Anim. Reprod. Sci. 64:65-75(2000). EMBL; AF152594; AAF73233.1; -. HSSP; P15692; 1VGH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Capreolus capreolus (Roe deer).
Eukaryota; Metazoa; Chordata; Canniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidea;
Cervidae; Odocoileinae; Capreolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-DEC-2001 (TREMBLrel. 19, VASCULAR ENDOTHELIAL GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=TESTIS;
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                                                                                                      Q9YMF3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9858;
                         Viruses; dsDNA viruses,
 NCBI_TaxID=10258;
              Parapoxvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
nes 6; Conserv
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                                                                                                                                                              CNDESLEC
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123 I
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                                                                                                                                                                                                            Conservative
                                                                                                       PRELIMINARY;
                                                                                                                                                              32
                                                                                                                                                                                                                                                                   AA:
                                                                                                                                                                                                                                                                   14354 MW;
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75.0%;
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75.0%;
                        no RNA stage; Poxviridae; Chordopoxvirinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
FACTOR ISOFORM 165 (FRAGMENT).
                                                         Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)

    Mismatches

                                                FACTOR HOMOLOG VEGF-E.
                                                                                                                                                                                                                    Score 36;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 36; DB Pred. No. 3.3;
                                                                                                       PRT;
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                                                                                                                                                                                                                                                                     0A756F54105A4CE1 CRC64;
                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      Fickel J.;
testis of roe
                                                                                                        132
                                                                                                                                                                                                                                  DB 6;
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A
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                                                            update)
                                                                                                                                                                                                           1; Indels
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                                                                                                                                                                                                                                  Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                      deer (Capreolus
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RESULT 077643

9

AC AC

077643 077643;

PRELIMINARY;

190 AA

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TD DT RRP DRR RT DRR RD DRR RT DRR RT
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Best Local
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                                                                                                                                 Query Match
Best Local :
                                                                                                          Matches
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HSSP; P15692; 1VPP.
Interpro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS00278; PDGF_2; 1.
SEQUENCE 132 AA; 14763 MW; 1
                                                                                                                                                                                                                                        InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF_2; 1.
SEQUENCE 148 AA; 17234 MW;
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042571;
01-JAN-1998 (
01-JAN-1998 (
01-DEC-2001 (
                                                                                                                                                                                                                                                                                                                                                                                                                               Cleaver O., Tonissen K.F., (
"Neovascularization of the )
Dev. Dyn. 0:0-0(1997).
EMBL; AF008593; AAB63679.1;
HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Meyer M., Clauss M., Lepple-Wienhues A., Waltenberger J., Bugustin H.G., Ziche M., Lanz C., Buettner M., Rziha H.J., Dehio C.; "A novel vascular endothelial growth factor encoded by orf virus, "Benediates anglogenesis via signalling through VEGFR-2 (KDR) but
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
VASCULAR ENDOTHELIAL GROWTH FACTOR 122.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBO J. 18:363-374(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    not VEGFR-1 (Flt-1) receptor tyrosine kinases.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=99107753; PubMed=9889193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-D1701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VEGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                    Local Similarity
nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              70
87 CNDESLEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CNEESLIC 8
                                                   1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CNDESLEC 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  78.3%;
75.0%;
                                                                                                                              78.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 36; DB Pred. No. 4.1; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 36; DB 12; Length 132; Pred. No. 3.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15F403A068B72926 CRC64;
                                                                                                                                                                                                                                                4AD153CA2F8B1E95 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        embryo.
                                                                                                                                                             DB 13; Length 148;
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                                                                                                             Indels
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87 CNDESLEC

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ID 267
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                                                                                                Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                        Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF 1; 1.
PROSITE; PS50278; PDGF 2; 1.
SEQUENCE 194 AA; 22672 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50279; PDGF_2; 1.
SEQUENCE 190 AA; 22342 MW;
                                                                                                                                                                                                                                                                                                                                   EMBL; AF008594; AAB63680.1
HSSP; P15692; 1VGH.
InterPro; IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               042572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expression in fetal tissues.";
Growth Factors 0:0-0(1998).
EMBL; AP071015; AAC23608.1; -.
HSSP: p15692; IVGH.
InterPro; IPR000072; PDGF.
Pfam; PF00341: pncs. "
                                                                                                                                                                                                                                                                                                                                                                                                          Cleaver O., Tonissen K.F., Saha M.S. "Neovascularization of the Xenopus Dev. Dyn. 0:0-0(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JAN-1998 (TrEMBLrel. 05, 01-JAN-1998 (TrEMBLrel. 05, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xenopodinae; Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VASCULAR ENDOTHELIAL GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bovidae; Caprinae; Ovis.
NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ovis aries (Sheep).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1998 (TrEMBLrel. 01-NOV-1998 (TrEMBLrel. 01-JUN-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-COLUMBIA-RAMBOULLIET;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TremBirel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CNEESLIC 8
||:||| |
| 86 CNDESLEC 93
1 CNEESLIC 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6,
                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                         AAB63680.1; -.
                                                                                           78.3%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08,
17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Saha M.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
FACTOR 196.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 36; DB
Pred. No. 5.3;
1; Mismatches
                                                                                           Score 36; I
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                                                                                                                                                                                           85D7BEC7CEFEF17E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0D5E3B3E5C53E739 CRC64;
                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                         embryo
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                                                                                                                 DB 13; Length 194;
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Adams M.D., Ceiniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
An Annanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
An George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang O., Chen L.X.,
Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
An Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
Buttis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
An Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Dietz S.M.,
Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9VFF4;
01-MAY-2000 (TrEMBLrel. 13,
01-MAY-2000 (TrEMBLrel. 13,
01-JUN-2000 (TrEMBLrel. 14,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q95T10
Q95T10;
Q1-DEC-2001
Q1-DEC-2001
Q1-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                       Drosophila melanogaster (Fruit fly).

Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;

Ephydroidea; Drosophilldae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stapleton M., Brokstein P., Hong L., Agbayani A., Carlson J., Champe M., Chavez C., Dorsett V., Farfan D., Frise E., George R., Gonzalez M., Guarin H., Li P., Liao G., Miranda A., Mungall C.J., Nunco J., Pacleb J., Paragas V., Park S., Phouanenavong S., Wan K. Yu C., Lewis S.E., Rubin G.M., Celniker S.; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                       MEDLINE-20196006; PubMed-10731132;
                                                                                                                                                                                                                                                                                                           STRAIN=BERKELEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CG3631 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9VFF4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydrodea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LD29155P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        233 CNEEETVC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity hes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CN BW SP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. 19, (TrEMBLrel. 19, (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49247 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78.3%;
62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3C0175ACCE2393CA CRC64;
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Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  502 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
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Query Match
Best Local Similarity
""" best 5; Conserv
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RA Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,

RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,

RA Liu X., Mattel B., McIntosh T.C., McDedd M.P., McDherson D.,

RA Merkulov G., Milshina N.V., Mobarry C.O., McDherson D.,

RA Mentulov G., Milshina N.V., Mobarry C., McDherson D.,

RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,

RA Palazzolo M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,

RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,

RA Spier E., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,

RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,

RA Spier E., Wang S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,

RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,

RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhang L.,

RA Zheng X.H., Zhong F.N., Rubin G.M., Venter E.,

RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;

"The genome sequence of Drosophila melanogaster.";

EMBL; AE003706; AAF55106.1;

DR EMBL; AE003706; AA; 58280 MW; CC2D77C417195B5E CRC64;
Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                           Pfam; PF00689; Cation_ATPase_C; 1
Pfam; PF00690; Cation_ATPase_N; 1
Pfam; PF00122; E1-E2_ATPase; 1.
Pfam; PF00702; Hydrolase; 1.
Pfam; PF007019; CATATPASE.
PROSITE; PS00119; CATATPASE.
PROSITE; PS00154; ATPASE_E1_E2; UI
SEQUENCE 1115 AA; 126718 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996
01-NOV-1996
01-DEC-2001
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Q27764;
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MEDLINE-91161669; PubMed-2150071;

MUTAKAMIK., Tanabe K., Takada S.;

"Structure of a Plasmodium yoelii gene-encoded protein homologous to the Ca(2+)-ATPase of rabbit skeletal muscle sarcoplasmic reticulum.";

J. Cell Sci. 97:487-495(1990).

EMBL; X55197; CAA38982.1; -.

HSSP; P04191; 1EUL.
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InterPro; IPR001757; E1-E2_ATPase.
InterPro; IPR001454; Hydrolase.
InterPro; IPR000661; Na_H_K_ATPase.
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01-DEC-2001 (TrEMBLrel. 19, La
01-DEC-2001 (TrEMBLrel. 19, La
KIAA1843 PROTEIN (FRAGMENT).
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01-MAY-1997 (TrEMBLrel. 03,
01-JAN-1998 (TrEMBLrel. 05,
01-DEC-2001 (TrEMBLrel. 19,
UNKNOWN PROTEIN (FRAGMENT).
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DNA Res. 4:363-369(1997).
EMBL; D89145; BAA13807.1; -.
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Nagase T., Nakayama M., Nakajima D., Kikuno R., Ohara O.;
"Prediction of the coding sequences of unidentified human
The complete sequences of 100 new cDNA clones from brain w
for large Proteins in vitro.";
DNA Res. 8:85-95(2001).
EMBL; AB058746; BAB47472.1; -.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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100.0 354 21 AAB10649 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70750 Huma 100.0 354 22 AAY00841 Huma 100.0 354 22 AAY0983 100.0 354 22 AAY97573 Huma 100.0 354 22 AAY97573 Huma 100.0 354 22 AAU04539 VEEF 91.3 8 22 AAU04539 VEEF 89.1 9 22 AAU04538 VEEF 89.1 9 22 AAU0453 VEEF 89.1 9 22 AAU04552 VEEF 87.0 326 19 AAW44296 VEEF 87.0 326 19 AAW44296 VEEF 87.0 326 19 AAW44296 Huma 84.8 620 AAW5652 VEEF 84.8 622 AAB004540 VEEF 84.8 622 AAB004540 VEEF 87.0 326 19 AAW36520 VEEF 87.0 326 19 AAW36520 VEEF 87.0 326 19 AAW36228 VEEF 87.0 326 19 AAW36228 VEEF 87.0 326 19 AAW36227 POXX 78.3 110 20 AAW36227 POXX 78.3 120 14 AAR38916 Bovi 78.3 132 18 AAW40305 PALF	Para	AAY33434	20	132	•	36	36
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100.0 354 21 AAB10649 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY707983 Huma 100.0 354 22 AAU08441 Pullon 100.0 354 22 AAU08441 Pullon 100.0 354 22 AAU08451 Pullon 100.0 354 22 AAU04539 Poxy 100.0 354 22 AAU04553 Poxy 100.0 354 22 AAU04526 Poxy 100.	Bovi	AAR38916	14	120		36	3 4
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 22 AAY70983 100.0 354 22 AAY909841 100.0 354 22 AAY95573 Huma 100.0 354 22 AAY97573 Huma 100.0 354 22 AAB37606 Poxx 100.0 354 22 AAB37652 Huma 100.0 354 22 AAB37652 Poxx 100.0 354 22 AAB37652 Huma 100.0 354 22 AAB3652 Poxx	Bov 1	AAR10916	12	120		36	ω ω
100.0 354 21 AAB10649 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70983 100.0 354 22 AAY70983 100.0 354 22 AAY70983 100.0 354 22 AAY70957573 Huma 100.0 354 22 AAB37606 VEGF 91.3 8 22 AAU04539 VEGF 91.3 8 22 AAU04541 VEGF 89.1 9 22 AAU04552 VEGF 87.0 9 22 AAU04553 VEGF 87.0 9 22 AAU04553 VEGF 87.0 9 22 AAU04554 VEGF 87.0 9 22 AAU04564 VEGF 87.0 9 22 AAU04565 VEGF 87.0 9 22 AAU04564 VEGF 87.0 9 22 AAU04569 VEGF 87.0 326 19 AAW44296 VEGF 87.0 326 19 AAW46523 VEGF 87.0 326 19 AAW46262 VEGF 87.0 326 19 AAW46264 VEGF 87.0 326 19 AAW46264 VEGF 87.0 326 19 AAW46229 VEGF 87.0 326 19 AAW46227 VEGF	Poxv	AAW86226	20	116	•	36	32
100.0 354 21 AAB10649 Huma 100.0 354 21 AAP20049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY707983 Huma 100.0 354 22 AAU08441 Huma 100.0 354 22 AAU08441 Huma 100.0 354 22 AAU08441 Huma 100.0 354 22 AAU08453 Huma 100.0 354 22 AAU04539 VEGF 91.3 8 22 AAU04539 VEGF 89.1 9 22 AAU04538 VEGF 87.0 9 22 AAU04552 VEGF 87.0 9 22 AAU04552 VEGF 87.0 326 19 AAW44296 VEGF 84.8 82 AAU04553 FRat 84.8 354 22 AAB70685 Huma 84.8 354 22 AAB70685 Huma 84.8 354 22 AAB7494 VEGF 78.3 101 20 AAW86229 POXY	Poxv	AAW86227	20	111		36	31
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY707983 Huma 100.0 354 22 AAV90983 100.0 354 22 AAV90983 100.0 354 22 AAV957573 Huma 100.0 354 22 AAV957573 Huma 100.0 354 22 AAV94539 VEGF 91.3 8 22 AAU04539 VEGF 89.1 9 22 AAU04541 VEGF 87.0 326 19 AAV44296 VEGF 87.0 326 19 AAV44296 VEGF 84.8 8 22 AAU04540 VEGF 84.8 8 22 AAU04540 Huma 80.4 923 22 AAB20904 Huma 100.2 AAV86229 POXV	Poxv	AAW86228	20	106	•	36	30
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70983 Huma 100.0 354 21 AAY70983 POLy 100.0 354 22 AAY70983 POLy 100.0 354 22 AAY75573 Huma 100.0 354 22 AAB37606 VEGF 91.3 8 22 AAU04539 VEGF 89.1 9 22 AAU04552 VEGF 89.1 9 22 AAU04552 VEGF 87.0 326 19 AAW44296 VEGF 88.0 354 22 AAU04540 Huma 84.8 354 22 AAU04540 Huma 84.8 620 18 AAW14994 Huma	Poxv	AAW86229	20	101	•	36	29
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY707983 Huma 100.0 354 22 AAU08441 Puma 100.0 354 22 AAU08441 Puma 100.0 354 22 AAY97573 Huma 100.0 354 22 AAU04539 VEGF 91.3 8 22 AAU04539 VEGF 89.1 9 22 AAU04541 VEGF 87.0 9 22 AAU04552 VEGF 87.0 9 22 AAU04553 VEGF 87.0 326 19 AAW14296 VEGF 88.0 326 19 AAW14296 VEGF 88.8 82 AAU04553 VEGF 88.9 9 22 AAU04553 VEGF 88.0 326 19 AAW14296 VEGF 88.0 326 19 AAW14296 VEGF 88.0 326 19 AAW14296 VEGF 88.0 354 22 AAB10685 Huma 88.8 854 22 AAB104540 Huma	Nove	ABG20904	22	923		37	28
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70750 Huma 100.0 354 22 AAY70983 Huma 100.0 354 22 AAV908441 Huma 100.0 354 22 AAY97573 Huma 100.0 354 22 AAY97573 Huma 100.0 354 22 AAB37606 WEGF 91.3 8 22 AAU04539 VEGF 89.1 9 22 AAU04540 VEGF 87.0 326 19 AAW44296 VEGF 87.0 326 19 AAW44296 VEGF 84.8 8 22 AAB004550 VEGF 87.0 326 19 AAW44296 VEGF 84.8 8 354 22 AAB00650 Huma	Humai	AAW14994	18	620		39	27
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70983 Puma 100.0 354 21 AAY70983 Puma 100.0 354 22 AAU08441 Puma 100.0 354 22 AAU08453 Puma 100.0 354 22 AAS37606 Puma 100.0 354 22 AAS37606 Puma 100.0 354 22 AAS37606 Puma 100.0 354 22 AAU04539 Puma 100.0 354 22 AAU04538	Humai	AAB70685	22	354		39	26
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70983 Huma 100.0 354 22 AAY7853 Puma 100.0 354 22 AAY9553 Huma 100.0 354 22 AAY9553 Huma 100.0 354 22 AAB37606 VEGF 91.3 8 22 AAU04538 VEGF 87.0 9 22 AAU04553 VEGF 87.0 326 19 AAW44296 Rat	VEGF	AAU04540	22	œ	•	39	25
100.0 354 21 AAB10649 Huma 100.0 354 21 AAB29049 Huma 100.0 354 21 AAY70750 Huma 100.0 354 21 AAY70750 Huma 100.0 354 22 AAY70983 Huma 100.0 354 22 AAV9841 Puma 100.0 354 22 AAY97573 Huma 100.0 354 22 AAX937606 Huma 100.0 354 22 AAX94539 VEGF 93.5 8 22 AA004539 VEGF 89.1 8 22 AA004552 VEGF 89.1 9 22 AA004552 VEGF 87.0 9 22 AA004553 VEGF		AAW44296	19	326	•	40	24
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750 100.0 354 21 AAY70983 100.0 354 22 AAU08441 100.0 354 22 AAU987573 100.0 354 22 AAU97573 100.0 354 22 AAU94539 93.5 8 22 AAU04539 91.3 8 22 AAU04588 89.1 9 22 AAU0458	VEGF	AAU04553	22	9	•	40	23
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAX70750 100.0 354 21 AAX70983 100.0 354 21 AAX70983 100.0 354 22 AAU08441 100.0 354 22 AAV97573 100.0 354 22 AAV37673 100.0 354 22 AAB37606 93.5 8 22 AAU04539 91.3 8 22 AAU04538 89.1 8 22 AAU04538	VEGF	AAU04552	22	9		41	22
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750 100.0 354 21 AAY70750 100.0 354 21 AAY70983 100.0 354 22 AAU08441 100.0 354 22 AAV97573 100.0 354 22 AAB37606 93.5 8 22 AAU04539 91.3 8 22 AAU04541	VEGF	AAU04538	22	æ	•	41	21
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750 100.0 354 21 AAY70983 100.0 354 22 AAU08441 100.0 354 22 AAU37506 100.0 354 22 AAB37606 93.5 8 22 AAU04539	VEGF	AAU04541	22	8	•	42	20
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750 100.0 354 21 AAY70983 100.0 354 21 AAY70983 100.0 354 22 AAU08441 100.0 354 22 AAU97573 100.0 354 22 AAB37666	VEGF	AAU04539	22	œ	•	43	19
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750 100.0 354 21 AAY70983 100.0 354 21 AAY70983 100.0 354 22 AAU08441 100.0 354 22 AAY97573	Humai	AAB37606	22	354	•	46	18
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750 100.0 354 21 AAY70983 100.0 354 21 AAY70983	Humai	AAY97573	22	354	•	46	17
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750 100.0 354 21 AAY70983	Poly	AAU08441	22	354	•	46	16
100.0 354 21 AAB10649 100.0 354 21 AAB29049 100.0 354 21 AAY70750	Humar	AAY70983	21	354		46	15
100.0 354 21 AAB10649 100.0 354 21 AAB29049	Humar	AAY70750	21	354		46	14
.0 354 21 AAB10649	Human	AAB29049	21	354	•	46	13
	Human	AAB10649	21	354	•	46	12

## ALIGNMENTS

RESULT AAU04525

AAU04525 standard; Peptide; 8 AA

26-SEP-2001 (first entry)

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Human; VEGF; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                     VEGF based monocyclic peptide 2.
                                                                                                                                                                                           Synthetic
           Achen MG,
                             (LUDW-) LUDWIG INST CANCER RES
                                                   18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                  18-JAN-2001; 2001WO-US01533
                                                                                                        26-JUL-2001.
                                                                                                                            WO200152875-A1
                                                                                                                                                            Disulfide-bond
          Hughes RA, Stacker S,
                                                                                                                                                           Location/Qualifiers 1..8
                                                                                                                                                  /note= "This bond cyclises the peptide"
            Cendron A;
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RESULTA
AAU04528
ID AAU0
AC AAU0
AC AAU0
XX AAU0
XX 26-S
XX VEGF
XX VEGF
XX Huma
KW neov
KW diab
XX Synt
XX Synt
XX Synt
XX Disu
FT Disu
FT Disu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            beta-beta carbon separation distances on opposite antiparallel strands of carbon separation of carbon separation of carbon separation and exposed loop of a growth factor protein carbon conversing the peptides by oxidising the cysteine residues. The carbon ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                    VEGF based bicyclic dimeric peptide #2.
                                                                                             Disulfide-bond
                                                                                                                                                                                                                                                                        diabetic retinopathy; chronic inflammation;
                                                                                                                                                                                                                                                                                           neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                             Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                 Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU04528 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 49; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-442248/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 cneeslic 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (vascular endothelial growth factor). The invention relates to a of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 46; DB 22; Llarity 100.0%; Pred. No. 6.4e+05; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA;
/note= "A disulfide bond forms between residue 1 and residue 1 of an identical peptide to form a dimeric peptide, or between residue 1 and residue
                                                                                                              note= "This bond cyclises the
                                                                                                                                                                     Location/Qualifiers
                                                                                                           peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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В
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                            AAU04522
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FT FT XX PN PD PD PF PR
                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                          cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritonael cavity, pleura, or brain. The peptides are used to inage blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and
AAU04522 standard; protein; 73 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   whose 3-dimensional structure is modelled on the expose loop of human MEGFD (vascular endothellal growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclicing the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold
                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 59; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequence represents a dimeric bicyclic peptide of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200152875-A1
                                                                                                                                                                                                             Local Similarity
nes 8; Conser
                                                                                                                  2 cneeslic
                                                                                                                                                             1 CNEESLIC 8
                                                  ω
                                                                                                                                                                                                                                                                                                                           9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hughes RA,
                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17\ \mathrm{of} the sequence appearing as \mathtt{AAU04527} also forming a dimeric peptide"
                                                                                                                                                                                                                              100.0%; Score 46; DB 22; 100.0%; Pred. No. 6.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stacker S,
                                                                                                                                                                                                          0,
                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cendron A;
                                                                                                                                                                                                                                                   Length 9;
                                                                                                                                                                                                      0;
                                                                                                                                                                                                   Gaps
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AAU04522; 26-SEP-2001

(first entry)

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Š
                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        dimensional modelling. The sequence is used in a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-regional procession of the condition of cold trauma, substance-induced post-regional processions, head, heat or cold trauma, substance-induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; VEGF-D; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human VEGF-D amino acids Vall01-Thr 173.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JAN-2000;
16-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diabetic retinopathy; chronic inflammation.
                                                                                                                                                                                                      dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, Cor -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequence represents Human VEGF-D (vascular endothelial growth factor) amino acids Vall01-Thr 173, used together with the C-terminal 23 residues of VEGF to make a hybrid theoretical molecule for 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page 90-91; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                      neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced
                                                                                                                                                               Sequence
                                                                        Local Similarity
    1 CNEESLIC 8
                                                  8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the cysteine residues
                                                                                                                                                                  73 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0176293.
2000US-0204590.
                                                Conservative
                                                                      100.0%; Score 46; DB 2
100.0%; Pred. No. 0.49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cendron A;
                                                                                              DB 22; Length 73;
                                                     0;
                                                       0
                                                       Gaps
                                                       0;
```

AAU04520

g Qy

46 cneeslic 53

1 CNEESLIC 8

Matches

Local

Similarity

100.0%;

Score 46; D Pred. No. 0. ; Mismatches

DB 22; 0.64; hes 0;

Length 96;

0;

Gaps

0;

Conservative

0;

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XEXEXEX
                                            CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is conditionally provided to the condition is conditionally provided to the conditional co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequence represents Human VEGF-D (vascular endothelial growth factor) amino acids Val101-PRO186. The sequence is used in a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU04520 standard; protein; 96 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-442248/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diabetic retinopathy; chronic inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; VEGF-D; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human VEGF-D amino acids Vall01-PRO186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; Page 89; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hughes RA,
   96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cendron A;
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RESULT
AAB11931
                                                                                                       В
                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                            biological activity. VEGF-D antegonists, e.g. antisense nucleic acids or triplex DNA, VEGF-D variants or antibodies (especially chimeric antibodies), are useful for the treatment or alleviation of malignant or melanomas, tumours or psoriasis. Anglogenesis and lymphangiogenesis stimulating amounts of VEGF-D can be administered to enhance the cacceptance and/or healing of skin grafts or to stimulate the healing of acceptance and/or healing of skin grafts or to stimulate the healing of a surgical or traumatic wound to the skin. Lymphangiogenesis stimulating amounts of VEGF-D can be used to treat lymphedema.

C stimulating amounts of vEGF-D can be used to treat lymphedema.

C indothelial proliferation stimulating amounts of VEGF-D are used to treat anhydrotic ectodermal dysplasia. VEGF-D antibodies are useful for detecting tumours expressing VEGF-D. Fully-processed VEGF-D can be used to stimulate at least one VEGF-D bloactivity chosen from endothelial cell proliferation, migration, survival and differentiation and lymphangiogenesis without induction vaccular researchilter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                             Matches
                                                                                                                                                                                                 Query Match
Best Local :
AAB11931 standard; protein; 109 AA.
                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                  and lymphangiogenesis without inducing vascular permeability.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence represents human vascular endothelial growth factor (VEGF)-D. The specification describes a human cell line which stably expresses VEGF-D, or fragments/analogues having VEGF-D biological activity. VEGF-D antagonists, e.g. antisense nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A human cell line stably expressing vascular endothelial growth factor D, useful for treating melanomas or tumours expressing VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 6; Page 72; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-405368/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-MAY-1998;
24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9933485-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma; tumour; psoriasis; anglogenesis; lymphanglogenesis; skin graft; wound healing; lymphedema; scieroderma; anhydrotic ectodermal dysplasia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human vascular endothelial growth factor (VEGF)-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY23889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY23889 standard; Protein; 109
                                                                                                                                                                           Local Similarity hes 8; Conserv
                                                                                                     5
4
                                                                    4
                                                                                                                                      1 CNEESLIC 8
                                              6
                                                                                                   cneeslic 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alitalo K,
                                                                                                                                                                                                                                                                       109 AA;
                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0087392.
97AU-0001131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US27373
                                                                                                                                                                 100.0%; Score 46; DB 20; Length 109; 100.0%; Pred. No. 0.73; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stacker SA;
                                                                                                                                                                   0;
                                                                                                                                                                   Gaps
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AAW53240
ID AAW5
D X A X
                                                                                                                                                                                                                     Query Match
Best Local Similarity
""" to hes 8; Conserv.
                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                           (vascular endothelial growth factor D), lacking both the N- and CC C-terminal regions. The invention relates to a monoclonal antibody, or CC fragments thereof, which is specifically reactive with the truncated CC human VEGF-D, and methods of preparing the antibody. The antibody of the Cinvention interferes with the binding of VEGF-D to the VEGF receptors CC VEGFR-2 and VEGF-3, but does not interfere with the binding of VEGF to these receptors and additionally is not reactive with VEGF-C. The CC antibody may be used to treat disorders associated with vascular CC permeability, endothelial cell proliferation, anglogenesis, neovascularisation and endothelial cell differentiation, especially cancer, diabetic retinopathy, psoriasis, and CC arthropathies. The antibody may also be used to treat fluid accumulation CC in the heart and/or lung via modulation of vascular permeability. It may CC additionally be used to detect VEGF-D and may be used to image lymphatic CC additionally in tissue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PR
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΧX
                                 AAW53240;
                                                               AAW53240 standard; Protein; 325 AA.
                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel compositions comprising antibodies reactive to vascular endothelial growth factor-D, useful for treating, e.g. angiogenesis, lymphangiogenesis and neovascularization disorders -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence represents a 109 amino acid truncated human VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Fig 1; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Truncated VEGF-D; vascular endothelial growth factor; human; monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3; vascular permeability disorder; endothelial cell proliferative disorder; angiogenic disorder; lymphangiogenic disorder; neovascularisation disorder; endothelial cell differentiation disorder; cancer; diabetic retinopathy; psoriasis; arthropathy; pulmonary oedema; detection; diagnosis; imaging; lymphatic vasculature.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-442498/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-DEC-1998;
17-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W0200037025-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human truncated VEGF-D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-NOV-2000 (first entry)
                                                                                                                                                                54 cneeslic 61
                                                                                                                                                                                                   1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                    109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stacker SA;
                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0113254.
99US-0134556.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US31332
                                                                                                                                                                                                                               100.0%; Score 46; DB 21; Length 109; 100.0%; Pred. No. 0.73; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                 Gaps
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03-AUG-1998

(first entry)

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CC D (VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis of in wound healing, tissue or organ transplantation, or to establish accollateral circulation in tissue infarction or arterial stenosis, and inhibition of angiogenesis in the treatment of cancer or of diabetic retinopathy. It can also be used in the treatment of lung disorders to improve blood circulation and organization of in the lung and/or gaseous exchange between the lungs and the blood account the lung and/or gaseous exchange between the lungs and the blood account of the lung and/or gaseous exchange between the lungs and the blood account of the lung and paseous exchange in chronic obstructive airway disease, and gaseous exchange in chronic obstructive airway disease, and an indicator of future metastatic risk. Antagonists can be used a indicator of future metastatic risk. Antagonists can be used a involving accumulations of fluid in the lung resulting from the invasculary resonability.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vascular endothelial growth factor; VEGF-D; angiogenesis;
modification; acceleration; wound healing; tissue; organ;
transplants; collateral circulation; infarction; arterial stenosis;
coronary artery disease; inhibition; cancer; treatment;
diabetic retinopathy; lung disorders; blood circulation;
gaseous exchange; chronic obstructive airway disease;
intestinal malabsorptive syndrome; biopsy; metastatic risk;
detection; diagnosis; congestive heart failure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens vascular endothelial growth factor D (VEGF-D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-NOV-1996;
05-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New isolated vascular endothelial growth factor-D - used to develop products for use in e.g. modifying angiogenesis or treating lung,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUL-1997;
23-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9807832-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 16; Pages 57-58; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAV20806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 heart or intestinal disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYHE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence is that of human breast vascular endothelial growth factor
detection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-179057/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UNIV HELSINKI LICENSING LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alitalo K,
                               in vascular permeability.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INST CANCER RES
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96US-0031097.
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97US-0038814.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-US14696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "|
156..158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   258..260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "potential N-linked glycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "potential N-linked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stacker SA, Wilks AF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "potential N-linked glycosylation site"
                            The products
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           glycosylation
                               can also be used
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; angiogenic protein; wound healing; vascular tissue repair; peripheral arterial disease; critical limb ischaemia; coronary disea; angiogenesis; tumour; inflammation; diabetic retinopathy; psoriasis; rheumatoid arthritis; autoimmune disease; allergy; cancer; therapy; infectious disease; neurodegeneration;
                                                                                                           increased vascular permeability), diabetic retinopathy, rhematoid arthritis or psoriasis. Agonists are also useful for stimulating (lymph)angiogenesis. The proteins are also useful for stimulating binding agents (potential therapeutic agents) and to raise antibodies. The antibodies are useful as therapeutic (ant)agonists; for detection, purification and targeting of proteins for in vivo or in vitro diagnosis (including imaging) or for therapy (including when linked to e.g. a label or cytoroxin); and for immunotyping of cells, e.g. for detecting minimal residual disease or haematopoietic progenitor/stem cells. It is also contemplated that the sequences might be useful for treating a very wide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY97572 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                          expression. Particularly they are used to stimulate wound healing, growth of damaged bone and tissue, and for repair of vascular tissue, especially peripheral arterial disease, critical limb ischaemia or coronary disease. Antagonists of the sequences are used to inhibit angiogenesis in tumours and to treat inflammation (where associated was angiogenesis of the sequences).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New nucleic acid encoding angiogenic proteins, useful e.g. for promoting healing of wounds and treating peripheral arterial disease, critical limb ischaemia or coronary disease - \!\!\!\!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human VEGF-D protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY97572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ameliorate disease and to detect diseases, or susceptibility, by detecting mutations or the presence or amount of angiogenic protexpression. Particularly they are used to stimulate wound healing the stimulate wound healing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence is vascular endothelial growth factor-D (VEGF-D), which is an angiogenic protein of the invention. The angiogenic and the DNA sequences encoding them, are used to prevent, treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2000; 2000WO-US14925
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 11; Page 226-227; 244pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAA91006.
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                                neurodegeneration, also as chemotactic agents
regeneration of the nervous system
                                                                                        range of other disorders, e.g. autoimmune diseases; allergy; cancer;
                                                             infectious diseases (viral,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CNEESLIC 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endothelial growth factor-D; VEGF-D
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Pred. No.
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                                                                    fungal or parasitic);
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                                   or for stimulating
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The present sequence represents a human zvegf2 growth factor encoded by the zvegf2 cDNA which was isolated from a human heart cDNA library. zvegf2 protein in a dimeric form acts as a mitogen for fibroblasts or smooth muscle cells. zvegf2 is claimed to be useful for stimulating the revascular/sation of tissue or the re-endothelialisation of vascular
                                                                                                                                                         Claim 1; Pages 53-54;
                                                                                                                                                                                           New isolated vascular endothelial growth factor - used to develop products for treating e.g. wounds, burns, myocardial infarction, tumours, psoriasis, arthritis, restenosis or organ transplants
                                                                                                                                                                                                                                                                                                        N-PSDB; AAV32823
                                                                                                                                                                                                                                                                                                                                                                        Conklin DC,
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06-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                    (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-NOV-1997;
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anglogenic effect; tumour; diabetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-OCT-1998 (first entry)
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                   Nygaard S,
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chemotactic effect;
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-NOV-1996;
05-FEB-1997;
10-FEB-1997;
19-JUN-1997;
                                                                                             New isolated vascular endothelial growth factor-D - used to develop products for use in e.g. modifying angiogenesis or treating lung, heart or intestinal disorders
                                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                     WPI; 1998-179057/16.
                                                                                                                                                                                                                                                                                                                                                                Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                (LUDW-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vascular endothelial growth factor; VEGF-D; angiogenesis; modification; acceleration; wound healing; tissue; organ; transplants; collateral circulation; infarction; arterial stenosis; coronary artery disease; inhibition; cancer; treatment; diabetic retinopathy; lung disorders; blood circulation; gaseous exchange; chronic obstructive airway disease; intestinal malabsorptive syndrome; blopsy; metastatic risk;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tissue. zvefg2 is particularly claimed to be useful for the treatment of full-thickness skin wounds, including venous stasis ulcers and diabetic ulcers. The zvegf2 protein is also claimed to be useful as an additive in tissue adhesives for promoting revascularisation of the healing tissue. Antagonists against zvegf2 can be used to block its mitogenic, chemotactic and anglogenic effects. The antagonists may therefore be useful for reducing growth of solid tumours by inhibiting neovascularisation of the developing tumour or by directly blocking tumour cell growth, in the treatment of diabetic retinopathy, psoriasis, and content and cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9807832-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-AUG-1996;
23-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  detection; diagnosis; congestive heart failure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW53241 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens vascular endothelial growth factor D (VEGF-D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                ) LUDWIG
                                                                                                                                                                                                                                                   AAV20807
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                                                                                                                                                                                                                                                                                                                                                            Alitalo K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and scleroderma.
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97US-0038814.
97AU-0007435.
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96AU-0001825.
96US-0023751.
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                                                                                                                                                                                                                                                                                                                                                                                                                                LICENSING LTD.
                                                                                                                                                                                                                                                                                                                                                         Stacker SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                         Wilks
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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Claim 16;

Pages 60-61; 101pp; English.

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Best Local Similarity
3, Conservations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in wound healing, tissue or organ transplantation, or to establish collateral circulation in tissue infarction or arterial stenosis, such as coronary artery disease, and inhibition of angiogenesis in the treatment of cancer or of diabetic retinopathy. It can also be used in the treatment of lung disorders to improve blood circulation in the lung and/or gaseous exchange between the lungs and the blood stream or to improve blood circulation to the heart and 02 gas permeability in cases of cardiac insufficiency, to improve blood from the cardiac insufficiency, to improve blood from the cardiac insufficiency, to improve blood from the cardiac insufficiency in improve blood from the cardiac insufficiency.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  flow and gaseous exchange in chronic obstructive airway disease, or to treat malabsorptive syndromes in the intestinal tract. Quantitation of VEGF-D in cancer biopsy specimens may be useful as an indicator of future metastatic risk. Antagonists can be used for treating e.g. conditions such as congestive heart failure, involving accumulations of fluid in the lung resulting from involving accumulations of fluid in the lung resulting from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequence is that of human lung vascular endothelial growth factor D (VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis
                                                                       The present sequence represents human vascular endothelial growth factor D (VEGF-D). The VEGF-D protein, compounds and antibodies, which can bind the protein, may be useful in, e.g. gene therapy and in treatment of inflammation and oedema. Vectors, containing the VEGF-D DNA, and VEGF-D DNA sequences may be used for screening for the compounds which bind to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                          Claim 1; Page 18-20; 52pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                           VEGF-D protein encoded by DNA - useful for, e.g. gene therapy and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAV15156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hirata Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-JUL-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inflammation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human vascular endothelial growth factor D.
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                                     the VEGF-D protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146 cneeslic 153
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nezu J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VEGF-D; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
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Thehes 8; Conserv
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                         This invention describes a novel vascular endothelial growth factor-X (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has CC vulnerary, cytostatic, antirheumatic, antiarthritic, antisporiatic and CC antidiabetic activity and acts as an angiogenesis and vascularization CC regulator. An antisense molecule of the invention is useful for treating CC or preventing cancer, rheumatoid arthritis, psoriasis and diabetic CC retinopathy by inhibiting angiogenic activity or inappropriate CC vascularization including formation and proliferation of new blood CC end tissue repair in a subject. The products of the invention are useful CC and tissue repair in a subject. The products of the invention are useful CC pressure sores, venous sores, diabetic ulcers and burns and to promote CC skin graft growth, tissue repeals, proliferation of new blood vessels, considered the invention and organ repair by promoting angiogenic activity or insularization. This sequence represents the human VEGD protein used to illustrate the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF-X; vascular endothelial growth factor; human; vulnerary; cytostatic; antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment; angiogenesis regulator; vascularization regulator; cancer; psoriasis; rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair; tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore; venous sore; diabetic ulcer; burns; skin graft growth; VEGD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                              New vascular endothelial growth factor protein, useful for treating or preventing diseases associated with inappropriate angiogenesis activity such as cancer, rheumatoid arthritis, psoriasis and wounds - \frac{1}{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-DEC-1998;
18-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human VEGD protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB10649 standard; Protein; 354 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gordon RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200037641-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JAN-2001
                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 11; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-442669/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dhanaraj SN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (JANC ) JANSSEN PHARM NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146 cneeslic 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sprengel JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98GB-0028377.
99US-0124967.
99US-0164131.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 46; DB Pred. No. 2.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dijkmans JJH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gosiewska A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
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Sequence

354 AA

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Best Local Similarity
Thes 8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
                                                 Matches
                                                             Query Match
Best Local :
                                                                                                                                                       The present sequence is the protein sequence of the human vascular endothelial growth factor D (VEGF-D). It was used to demonstrate the methods of the invention, which involve the screening of individuals to determine which vascular endothelial growth factor receptor 3 (VEGFR-3, also known as Flt4 or fms-like tyrosine kinase 4) alleles they possess and thus their likelihood of developing hereditary lymphoedema conditions associated with lymphoedema include Milroy-Nonne syndrome,
                                                                                                            Sequence
                                                                                                                                                                                                                                                                                              Screening a human subject for increased risk of developing a lymphatic disorder, comprises assaying a nucleic acid to determine a mutation altering the sequence of a vascular endothelial growth factor
                                                                                                                                                                                                                                                            Disclosure; Page 64-65; 76pp; English.
                                                                                                                                                                                                                                                                                                                                                                                        Ferrell RE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vascular endothelial growth factor receptor 3; VEGF Milroy-Nonne syndrome; lymphoedema praecox; VEGF-D; vascular endothelial growth factor D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200058511-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-JAN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB29049 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                            (LUDW-) LUDWIG INST CANCER RES
(UYHE-) UNIV HELSINKI LICENSING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; Flt4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human VEGF-D protein sequence
146 cneeslic 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           146 cneeslic 153
                       1 CNEESLIC 8
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DB; AAC62407.
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                                                             Similarity
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                                                                                                                                                 early onset
                                                                                                              354 AA
                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                        Alitalo K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                           HELSINKI LICENSING LTD OY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fms-like tyrosine kinase 4; lymphoedema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US06133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US06133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein; 354 AA
                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                              lymphoedema and lymphoedema praecox, which is late
                                                                                                                                                                                                                                                                                                                                                                                      Finegold DN,
                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                             Score 46; DB 21;
Pred. No. 2.3;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 46; DB Pred. No. 2.3 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VEGFR-3;
                                                                     Length 354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 354;
                                             0;
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146 cneeslic

1 CNEESLIC 8

Matches

Conservative

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Mismatches

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Gaps

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The patent discloses a method to treat neoplastic disease characterised CC by expression of fms-like tyrosine kinase 4 (Fit4) receptor (also CC referred as vascular endothelial growth factor receptor-3, VEGFR-3) in CC endothelial cells of blood vessels adjacent to malignant neoplasm. The CC method involves administering a compound that inhibits binding of a CC ligand to Fit4 thereby inhibiting Fit4 mediated proliferation of vascular cells. The compound is useful for treating neoplastic disease such as breast carcinomas, squamous cell carcinomas, lymphomas, melanomas can be used for manufacturing medicament useful for diagnostic screening, imaging and CC treatment of malignancies characterised by Fit4-expressing blood cells. The Fit4 gene maps to chromosomal region 5q35 and is expressed as 5.8 kb cand 4.5 kb mRNAs which differ in their 3' sequences and are CC differentially expressed in HEL and DAMI cell lines. Fit4 because (RTKs). It is used as a target for tumour imaging and anti-tumour therapy.

CC The FITA as a target for tumour imaging and anti-tumour therapy.
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AAY70750
                                        Query Match
                                                                                                   Sequence
                                                                                                                                                      factor D (VEGF-D), a specific example of Flt4 binding compound. A recombinantly matured VEGF-D lacking residues 1-92 and 202-354 retains the ability to activate VEGFR-2 and VEGFR-3 receptors and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treating neoplastic diseases such as lymphoma, carcinomas, melanomas and sarcomas, involves administering a compound capable of inhibiting binding of ligand proteins to fms-like tyrosine kinase-4 receptor -
                                                                                                                                          associate as non-covalently linked dimers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; receptor tyrosine kinase; RTK; Flt4; fms-like tyrosine kinase 4; VEGFR-3; vascular endothelial growth factor receptor-3; chromosome 5q35; cytostatic; tumour imaging; anti-tumour therapy; treatment; diagnosis; neoplastic disease; lymphoma; carcinoma; breast; squamous cell; melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 15-17; Page 142-143; 148pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alitalo K, Kaipainen A, Valltola R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sarcoma; malignancy; VEGF-D; vascular endothelial growth factor D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY70750 standard; Protein; 354 AA
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Local Similarity nes 8; Conserv
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                                                                                                   354 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0169079
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              100.0%;
                Score 46; I
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jussila
        DB
ใ.3;
                                    21;
                                    Length 354;
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RRESULT 1
AAY70983
IID AAY770987
XX AAY70987
XX AAY707
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XX VASC
XX VASC
KW VASC
KW VASC
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KW Crest
XX FT FT Pep
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Query Match
Best Local Similarity
"-+rhes 8; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present amino acid sequence is the complete human prepro-vascular endothelial growth factor (VEGF)-D. VEGF-D has the ability to stimulate re-endothelialisation of an injured blood vessel, without significant stimulation of smooth muscle cell proliferation. It can bind to and stimulate VEGFR-2 (vascular endothelial growth factor receptor) and/or VEGFR-3 phosphorylation in cells that express such receptors. An anti-restenosis agent comprising either a VEGF-D gene or protein is used in a method to reduce or prevent restenosis and stenosis of a blood vessel following vascular trauma e.g., cardiovascular surgery and percutaneous transluminal coronary angioplasty.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Preventing stenosis and restenosis in mammals using vascular endothelial growth factor proteins or the nucleic acids encoding them % \left( 1\right) =\left\{ 1\right\} 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W0200024412-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 53-55; 61pp; English.
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(UYHE-) UNIV HELSINKI LICENSING LTD OY.
(YLAH/) YLA-HERTTUALA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                            354 AA;
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                                                               Conservative
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/note= "Cleavage results in fully-processed mature
VEGF-D protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein"
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/note= "Cleavage results in partially-processed VEGF-D
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/note= "Cleavage results in partially-processed VEGF-D
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/note= "Processed vascular epithelial growth factor-D"
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                                                               100.0%; Score 46; DB:
100.0%; Pred. No. 2.3;
Live 0; Mismatches
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                                                                                                                                                                                         DB 21; Length 354;
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Search completed: June 17, 2002, 16:02:12 Job time: 421 sec

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Searched:
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Sequence:
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                Score
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seq length: 2000000000
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1: /cgn2_6/ptodata/2/
2: /cgn2_6/ptodata/2/
3: /cgn2_6/ptodata/2/
4: /cgn2_6/ptodata/2/
5: /cgn2_6/ptodata/2/
6: /cgn2_6/ptodata/2/
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Match
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Maximum Match 100%
Listing first 45 summaries
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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                                                           DB
                            US-08-915-795-9
US-08-915-795-8
US-08-915-795-8
US-08-915-795-8
US-08-915-039B-31
US-08-915-039B-31
US-08-915-039B-31
US-08-915-079-13
US-08-125-077-13
US-08-125-077-13
US-08-125-0719A-29
US-08-125-073-39
US-08-742-243-44
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US-08-915-795-5
5194596-9
5219739-9
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5219739-17
5219739-18
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   5194596-19
5219739-20
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                                                                                                                                                                                                                                                                                         Sequence 3, Appli
Sequence 5, Appli
Patent No. 5194596
Patent No. 5219739
Patent No. 5219739
Patent No. 5219739
Patent No. 5312671
 Sequence 9, Appli
Sequence 8, Appli
Sequence 15, Appl
Sequence 15, Appl
Sequence 31, Appl
Sequence 31, Appl
Sequence 35, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 4, Appli
Sequence 4, Appli
Sequence 4, Appli
Sequence 44, Appl
Sequence 45, Appli
Sequence 45, Appli
Sequence 45, Appli
Sequence 47, Appli
Sequence 48, Appli
Sequence 49, Appli
Sequence 41, Appli
Sequence 31, Appli
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Query Match 100.0%; Score 46; DB 4; Leng Best Local Similarity 100.0%; Pred. No. 0.55;	US-08-915-795-3 US-08-915-795-3 US-08-915-795-3 Sequence 3, Application US/08915795 Patent No. 6235713 GENERAL INFORMATION: APPLICANT: Marc G. ACHEN APPLICANT: Marc G. ACHEN APPLICANT: Steven A. STACKER APPLICANT: Steven A. STACKER APPLICANT: Steven A. STACKER APPLICANT: Kari ALITALO TITLE OF INVENTION: GROWTH FACTOR NUMBER OF SEQUENCES: 11 CORRESPONDENCE ADDRESS: ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P. STREET: 1200 G Street, NW, Suite 700 CITY: Washington STATE: DC COUNTRY: United States of America ZIP: 20005 COUNTRY: United States of America COUNTRY: United States of America ZIP: 2005 COUNTRY: United States of America COUNTRY: United States of America ZIP: 2005 COUNTRY: United States of America COUNTRY: United States of America ZIP: 2005 COUNTRY: United States of America ZIP: 2005 COUNTRY: United States of America COUNTRY: United States of America ZIP: 2005 COUNTRY: United	ALIGNMENTS	28 32 69.6 145 3 US-08-784-551C-2 29 32 69.6 147 3 US-09-392-932-2 30 32 69.6 147 3 US-09-392-932-1 31 32 69.6 165 6 5194596-18 32 32 69.6 165 6 5219739-19 33 32 69.6 191 3 US-08-567-200A-2 35 32 69.6 191 3 US-08-691-794-2 36 69.6 191 4 US-08-952-430-56 37 32 69.6 191 4 US-08-922-3 38 32 69.6 191 4 US-08-922-3 39 32 69.6 191 4 US-08-807-992B-2 40 32 69.6 191 6 532671-4 41 32 69.6 215 6 5240848-7 42 32 69.6 215 6 5219739-2 43 32 69.6 215 6 5219739-2 45 32 69.6 215 6 5219739-2 46 32 69.6 215 6 5219739-2
Length 325;			Sequence 2, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Patent No. 5219739 Sequence 2, Appli Sequence 2, Appli Sequence 3, Appli Patent No. 5240848 Sequence 49, Appl Patent No. 5219739 Patent No. 5240848 Sequence 10, Appl

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RESULT 3
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                                                 ;Patent No. 5194596
; APPLICANT: TISCHER, EDMUND G.;ABRAHAM, JUDITH A.;FIDDES, JOHN ;C.;MITCHELL, RICHARD L.
;TIFLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
                                                                                                                                                                                                                                                                                                                            ; ORIGINAL SOURCE:
; TISSUE TYPE: Human Lung
US-08-915-795-5
                                            GROWTH FACTOR
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: N/A
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:

CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8844
TELEPAX: (202) 628-8844
         CURRENT APPLICATION DATA:
                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: p:
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/915,795
                                                                                                                                                                                    146 CNEESLIC 153
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CORRESPONDENCE ADDRESS: Evenson, McKeown, Edwards & Lenahan P.L.L.C.

STREET: 1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 1200
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                               Local Similarity
nes 8; Conserv
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Conservative 0
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Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Marc G. ACHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kari ALITALO
                                                                                                                                                                                                                                                                                                                                                                                                      linear
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Query Match
Best Local Similarity
Watches 6; Conserva
                                                                                           5194596-17
                                                                                                                                                                                                                                                       ;Patent No. 5194596
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN ;C.; MITCHELL, RICHARD L.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
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5219739-9
                                                                                                                          ; SEQ ID NO:17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5219739-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOHN C.; MITCHELL, RICHARD L.
TITLE OF INVENTION: DNA SEQUENCES ENCODING BYEGF120 AND HYEGF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN VAASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BYEGF120 AND HYEGF121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
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Best Local Similarity
Matches 6; Conserva
                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                      NUMBER OF SEQUENCES: 32
CURRENT APPLICATION NUMBER: US/07/450,883
FILING DATE: 14-DEC-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 450,883
FILING DATE: 14-DEC-1989
APPLICATION NUMBER: 387,545
FILING DATE: 27-JUL-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
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FILING DATE: 14-DEC-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 387,545
FILING DATE: 27-JUL-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                         FILING DATE: 27-JUL-1989
                                                                                                                                                     APPLICATION NUMBER: 387,545
                                                                                                            LENGTH: 164
                                                                                                                                                                                                                                                                                                                                                                                          60 CNDESLEC 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 120
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FILING DATE: 27-JUL-1990
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              Conservative
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75.0%;
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75.0%;
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                          Score 36; DB Pred. No. 16;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 36; DB
Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 36; DB 6;
Pred. No. 11;
             Mismatches
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           Indels
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,60 CNDESLEC 67

1 CNEESLIC 8

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5219739-17
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PILING DATE: 27-JUL-1990

PRIOR APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

PILING DATE: 27-JUL-1990

PILOR APPLICATION DATA:

PARTOR APPLICATION DATA:

PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PATENT NO. 5219739

PATENT NO. 5219739

APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN C.; MITCHELL, RICHARD L.

JOHN C.; MITCHELL, RICHARD L.

JOHN C.; MITCHELL, RICHARD L.

HYER FILE OF INVENTION: DNA SEQUENCES ENCODING BYEGF120 AND HYER FILE AND METHODS FOR THE PRODUCTION OF BOYINE AND HUMAN VAASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BYEGF120 AND HYEGF121 NUMBER OF SEQUENCES: 40

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5219739-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;SEQ ID NO:17:
                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                          5219739-18
                                                       5332671-3; Patent No. 5332671
                                                                                               RESULT
; APPLICANT: FERRARA, NAPOLEONE; LEUNG, DAVID W.H.
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
; GROWTH FACTOR AND DNA ENCODING SAME
                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO:18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/
FILING DATE: 27-JUL-1990
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 450,883
FILING DATE: 14-DEC-1989
APPLICATION NUMBER: 387,545
FILING DATE: 27-JUL-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 78.3%;
Local Similarity 75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 164
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 450,883 FILING DATE: 14-DEC-1989 APPLICATION NUMBER: 387,545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 CNDESLEC 67
                                                                                                                                                                                                                              Local Similarity nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                             LENGTH: 164
                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 27-JUL-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CNEESLIC 8
                                                                                                                                                     60 CNDESLEC 67
                                                                                                                                                                        1 CNEESLIC 8
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75.0%;
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                                                                                                                                                                                                                                              Score 36;
Pred. No.
                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                  DB 6;
                                                                                                                                                                                                                                                                    Length 164;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                           ; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; TISSUE TYPE: Mouse Lung
US-08-915-795-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;SEQ ID NO:3
                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/0P.

APPLICATION NUMBER: US/0P.

CURSIFICATION NUMBER: US/0P.

CLASSIFICATORY

APPLICATION NUMBER: US/0P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 9, Application US/08915795 Patent No. 6235713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/07/389,722
FILING DATE: 04-AUG-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 369,424
FILING DATE: 21-JUN-1989
APPLICATION NUMBER: 351,117
FILING DATE: 12-MAY-1989
           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 9: SEQUENCE CHARACTERISTICS: LENGTH: 321 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 15
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Kari ALITALO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 190
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CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CNEESLIC 8
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                                                                                                                                          STRANDEDNESS:
                                                                                                                              TOPOLOGY:
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                                                                                                                                                            amino acid
                                                                                                                                                                                                                        N/A
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1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     United States of America
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                                                                                                                                                                                                                                         (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Release #1.0, Version #1.25
                                                                                                                            linear
                                                                                                                                             single
78.3%;
62.5%;
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75.0%;
                                                                                                                                                                                                                                                                                                        26,269
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Pred. No. 18;

    Mismatches

                                                                                                                                                                                                                                                                                            1064/42983
Score 36; DB
Pred. No. 30;
                 DB 4; Length 321;
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Best Local Similarity Matches 5; Conserv

Conservative

2; Mismatches

1; Indels

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Gaps

1 CNEESLIC 8

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; TOPOLOGY: line
; MOLECULE TYPE: p
; ORIGINAL SOURCE:
; TISSUE TYPE: M
US-08-915-795-8
                                                                                                                                                     US-08-586-039B-33
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          GENERAL INFORMATION:
APPLICANT: Bayne, Marvin L.
APPLICANT: Thomas Jr., Kenneth A.
APPLICANT: Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR C
TITLE OF INVENTION: SUBUNIT
                                                                                                                  Sequence 33, Application US/08586039B Patent No. 6140073
                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 8, Application US/08915795 Patent No. 6235713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSITION:
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
PROTECTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                         151 CNEEGVMC 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Kari ALITALO TITLE OF INVENTION: GROW
                                                                                                                                                                                                                                                                                           Local Similarity
les 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146 CNEEGVMC 153
                                                                                                                                                                                                                                                         1 CNEESLIC 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/915,795 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Washington
STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
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1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        United States of America
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Andrew F. WILKS
Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                            Mouse Lung
                                                                                                                                                                                                                                                                                                                                                                                                                           protein
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                                                                                                                                                                                                                                                                                                        78.3%;
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                                                                                                                                                                                                                                                                                                        Score 36;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1064/42983
                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                    DB 4; Length 358;
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RESULT 12
US-08-469-427A-15
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                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                                                                    Sequence 15, Application US/08469427A Patent No. 5607918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                               TITLE OF INVENTION: VA.
TITLE OF INVENTION: DN.
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                            APPLICANT: Eriksson, Ulf
APPLICANT: Olofsson, Birgitta
APPLICANT: Alitalo, Kari
APPLICANT: Pajusola, Katri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: 11 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 07065-0900
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                   CLL.
STATE: LC
TD: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
08/124,259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS
SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
          APPLICATION NUMBER: US/08/469,427A FILING DATE: 06-JUN-1995
                                                                                                                                                                          STREET: 1200 G St
CITY: Washington
CLASSIFICATION:
                                                                                                                                                                                           ADDRESSEE: Evenson, McKeown, Edwards & Lenaham STREET: 1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86 CNDEALEC 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Hand, J. Mark
REGISTRATION NUMBER: 36
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 16-JACLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CNEESLIC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Rahway
STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Merck & Co., Inc. STREET: 126 E. Lincoln Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (908) 594-4720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM PC compatible
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71.78; 62.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   594-3905
                                                                                                                                                                                                                                                                DNA CODING THEREFOR
                                                                                                                                                                                                                                                                            VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36,545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18361DA
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4; Length 146;
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Gaps

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US 08/397,651

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
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                                                                                             PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/469,427

FILING DATE: 06-JUN-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/397,651

FILING DATE: 01-MAR-1995

ATTORNEY/AGENT INFORMATION:

NAME: EVANS, Joseph D

REGISTRATION NUMBER: 26,269

REFERENCE/DOCKET NUMBER: 1064/41979

TELECOMMUNICATION INFORMATION:

THELEPHONE: 0203 638800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (202) 628-8844 INFORMATION FOR SEQ ID NO: 1
TELEFAX: (202) 628-8844
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 190 amino acids
                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARRE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/569,063C
FILING DATE: 06-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 189 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 01-MAR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: ERIKSSON, Ulf
APPLICANT: OLOFSSON, Birgitta
APPLICANT: ALITALO, Kari
APPLICANT: PAJUSOLA, Katri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND TITLE OF INVENTION: DNA CODING THEREFOR NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y Match 71.7%;
Local Similarity 62.5%;
hes 5; Conservative
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STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Evans, Joseph D
REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Washington
STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85 CNDEALEC 92
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
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                                                                                  TELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                  (202) 628-8800
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Query Match
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Watches 5; Conserve
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                             ρy
                                                                                                                                            ; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-586-039B-31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 31, Application US/08586039B Patent No. 6140073
                                                                          Query Match
Best Local Similarity
                                                                Matches
                                                                                                                                                                                                                         TELEFAX: (908) 594-4720
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 190 amino acids
                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
REGISTRATION NUMBER: 36,545
REGISTRATION NUMBER: 18361DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: single TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: VASCULAR TITLE OF INVENTION: SUBUNIT NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Bayne, Marvin L.

APPLICANT: Thomas Jr., Kenneth A.

TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86 CNDEALEC 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 16-JA CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 126 | CITY: Rahway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
86 CNDEALEC 93
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                               1 CNEESLIC 8
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                                                                                                                                                                                                               amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               126 E. Lincoln Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
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                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Merck & Co., Inc.
                                                                                                                                                                                                                                                                                                (908) 594-3905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-JAN-1996
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                                                                             71.7%;
62.5%;
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                                                                Score 33; DB 4;
Pred. No. 60;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 33; DB Pred. No. 60;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2;
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RESULT

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Sequence 35, Application US/08386039B

PETENT NO. G140073

GENERAL INFORMATION:
APPLICANN: Bayne, Marvin L.
APPLICANN: BYONES J.
APPLICANN: BYONES J.
TITLE OF INVENTION: SUBURIT

NUMBER OF SEQUENCES: 49

CORRESSONDENCE ADDRESS:
ADDRESSE: Mercy COUNTRY: NEW PROCESS: 40

COMPUTER: New PROCESS: 40

COMPUTER: NEW PROCESS: 40

COMPUTER: NEW PROCESS: 40

COMPUTER: NEW PROCESS: 40

SOFTWARE: MICROSOFT WORD

COUNTRY: USA

SOFTWARE: MICROSOFT WORD

COUNTRY: DATE: OS0124,259

FILING DATE: 15-JAN-195

COURENT APPLICATION NUMBER: 05/08/586,039B

FILING DATE: 15-JAN-195

FILING DATE: 15-JAN-195

FILING DATE: 15-JAN-195

APPLICATION NUMBER: 18-JAS-194

APPLICATION NUMBER: 18-
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OM protein - protein search, using sw model
                                                                                                                                                         Minimum DB seq length: 0 Maximum DB seq length: 2000000000
                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                             Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                  Database :
                                                                                                                      Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                     June 17, 2002, 15:58:20; search time 95.43 Seconds (without alignments)
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61
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                                                    PIR_71:*
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Listing first 45 summaries
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                                pir1:*
               pir2:*
pir3:*
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pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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## SUMMARIES

	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	6	տ	4	ω	N	ב	No.	Result	
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JE0003 AE0663	T00826 A84845 H90901	T20109 T25095 T16283	T31861 T02522 C75405 T19995 B84725
hypothetical 8.6K probable multidrug	hypothetical prote probable ABC trans probable lipoprote probable lipoprote	hypothetical prote hypothetical prote hypothetical prote agenome polyprotein	hypothetical prote origin recognition streptomycin biosy hypothetical prote probable glucosylt hypothetical prote

## ALIGNMENTS

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hypothetical protein 151 - fowlpox virus (fragment)
N;Alternate names: ORF3 protein
C;Species: fowlpox virus
C;Spate: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 03-Nov-2000
C;Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 03-Nov-2000
C;Accession: PQ0506, S27935
R;Ogawa, R.; Calvert, J.G.; Yanagida, N.; Nazerian, K.
J. Gen. Virol. 74, 55-64, 1993
A;Reference number: JQ1894; MUID:93139784
A;Reference number: JQ1894; MUID:93139784
A;Accession: PQ0506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:M88588; NID:g333522; PIDN:AAA47188.1; PID:g333525 A;Note: submitted to the EMBL Data Library, May 1992
                                                                                                                                                                                                                                                                                                                                                                               R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, Kawa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, Res. 6, 83-101, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical protein APE2372 - Aeropyrum pernix (strain K1)
C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Aug-1999
C;Accession: A72466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-151 < OGA>
                                                                                                                                                                        A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-169 <KAW>
A;Cross-references: DDBJ:AP000064; NID:g5105945; PIDN:BAA81385.1; PID:d1045171;
A;Experimental source: strain K1
                                                                                                                                                                                                                                                                                                       A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, A;Reference number: A72450; MUID:99310339
A;Accession: A72466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A72466
                                                                                                                         A; Gene: APE2372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 63.9
Best Local Similarity 50.0
Matches 5; Conservative
Matches
                      Query Match
Best Local Similarity
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Conservative
                        63.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4; Mismatches
     2
                           Score 39; DB 2;
Pred. No. 12;
        Mismatches
        2; Indels
                                                       Length 169;
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           Gaps
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hypothetical protein DKFZp434N1427.1 - human (Species: Homo sapiens (man) (C;Date: 04-Feb-2000 #sequence_revision 04-Feb-2000 #text_change 04-Feb-2000 C;Accession: T46444 R;Bloecker, H.; Boecher, M.; Brandt, P.; Mewes, H.W.; Gassenhuber, J.; Wiemann, submitted to the Protein Sequence Database, January 2000 A;Reference number: Z23032
                                                                                                                                                                                RESULT
T46444
A; Accession 746444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A:Accession: 143311
A:Accession: 143311
A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Molecule type: DNA
A:Residues: 1-925 <PAUD
A:Cross-references: EMBL:U53181; PIDN:AAA93485.1; GSPDB:GN00023; CESP:F36D4.3
A:Experimental source: strain Bristol N2; clone F36D4
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                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Introns: 24/3; 56/2; 103/3; 187/1; 387/2; 429/3; 455/3; 516/1; 555/1; 782/2; 882/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: Z20603
A; Accession: T29311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hypothetical protein F36D4.3 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Map position: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, March 1996 A; Description: The sequence of C. elegans cosm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Pauley,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:S96211; NID:g247729; PIDN:AAB21865.1; PID:g247730 C;Superfamily: metalloproteinase inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-207 <TAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Tanaka, T.; Andoh, N.; Takeya, T.; Sato, E.
Mol. Cell. Endocrinol. 83, 65-71, 1992
A;Title: Differential screening of ovarian cDNA libraries detected the expression of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            collagenase inhibitor - pig
C;SpecLes: Sus scrofa domestica (domestic pig)
C;Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A:Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Reference number: 147061; MUID:92201478
A;Accession: 147061
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Best Local Similarity
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50.0%;
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54.58;
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Pred. No.
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Pred. No. 15;
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A:Map position: 4R
C:Superfamily: conserved hypothetical protein s110936
C:Keywords: transmembrane protein
F;210-226/Domain: transmembrane #status predicted <TMM>
                                                                                                                               A; Experimental source: strain AB972 C; Genetics:
                                                                                                       A;Gene: MIPS:YDR539w
                                                                                                                                                        A;Cross-references: EMBL:U43834; NID:g1165292; PID:g1165294; GSPDB:GN00004; MIPS:YD
                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-503 <DIE>
                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, December 1995
                                                                                                                                                                                                                                                                                                             R;Dietrich, F.S.; Mulligan, J.; Allen, E.; Araujo, R.; Aviles, E.; Berno, A.; Carpe
H.; Lin, D.; Mosedale, D.; Nakahara, K.; Namath, A.; Oefner, P.; Oh, C.; Petel, F.X
                                                                                                                                                                                                                                                                                                                                                                               probable membrane protein YDR539w - yeast (Saccharomyces cerevisiae)
N;Alternate names: hypothetical protein D3703.2
C;Species: Saccharomyces cerevisiae
C;Date: 10-Apr_1996 #sequence_revision 19-Apr-1996 #text_change 17-Mar-2000
                                                                                                                                                                                                                                        A; Accession: S62018
                                                                                                                                                                                                                                                              A; Reference number: S62017
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A;Introns: 105/1
C;Superfamily: Caenorhabditis hypothetical protein C4967.2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Henkhaus, J.; Wohldmann, P.; Beck, C.
submitted to the EMBL Data Library, July 1997
A;Description: The sequence of C. elegans cosmid C49D10.
A;Reference number: Z21108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Experimental source: strain Bristol N2; clone C49D10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
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A:Molecule type: mRNA
A:Residus: 1-1062 <AAA>
A:Cross-references: EMBL:AL137701
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les 6; Conserv
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54.5%;
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66.78;
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Pred. No.
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Pred. No. 73;
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hypothetical protein F55G1.13 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C;Accession: T29234
R;Murray, J; Le, T.T.
submitted to the EMBL Data Library, May 1996
A;Description: The sequence of C. elegans cosmid F55G1.
A;Reference number: Z20591
A;Accession: T29234
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-616 <MUR>
A;Coss-references: EMBL:U58750; PIDN:AAB00653.1; GSPDB:GN00022; CESP:F55G1.13
A;Experimental source: Strain Bristol N2; clone F55G1
C;Genetics:
                                                                                                                                                                                                                                                                                                                   R;Wilson, R.; Bentley, D.; Gattung, S. submitted to the EMBL Data Library, April 1996 A;Description: The sequence of C. elegans cosmid F26F12. A;Reference number: Z21493 A;Accession: T34239 A;Accession: T34239 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type. Num
                                                                                                                                                                                                                                A;Cross-references: EMBL:U55373; PIDN:AAC25894.1; GSPDB:GN00023; CESP:F26F12.7 A;Experimental source: strain Bristol N2; clone F26F12 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical protein F26F12.7 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 29-Oct-1999 C;Accession: T34239 R;Wilson, R.; Bentley, D.; Gattung, S.
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A;Map position: 4
A;Introns: 98/1; 136/1; 230/1; 256/1; 363/1; 401/1; 443/1; 484/1;
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A;Map position: 5
A;Introns: 110/3; 441/3; 801/2; 1244/3; 1693/2; 1784/1
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A; Residues: 1-1829 <WIL>
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  343 CIDPPLTEVP 352
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nes 6; Conserv
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                                    CISVPLTSVP 10
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Pred. No.
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Pred. No. 1.9e+02;
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Pred. No.
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ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.;
C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; M.
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.;
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.;
ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                           A;Title: Sequence and analysis of chromosome 4 of A;Reference number: A85001; MUID:20083488 A;Accession: H85135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical protein AT4g12650 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 16-Feb-2001
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A; Accession: B96814
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A; Residues: 1-527 <STO>
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A; Map position: 1
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A; Residues: 1-184 <STO>
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344 CISVPLT 350
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nes 7; Conser
                                               1 CISVPLT 7
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Chung, M.K.; Conn, L.;
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85.7%;
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probable lpqB protein - Mycobacterium tuberculosis (strain H37RV) c;Species: Mycobacterium tuberculosis C;Date: 17-Jul-1998 #sequence\_revision 17-Jul-1998 #text\_change 22-Oct-1999 C;Accession: F70592 R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, i

Connor, R.;

Davies,

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Parkhill, J.; Devlin, K.; Fo

Feltwell,

T.;

; Churcher, C.; Harris, D.
Gentles, S.; Hamlin, N.;

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RESULT F70592

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A:Status, preliminary
A;Molecule type: DNA
A;Residues: 1-788 <ARN>
A;Cross-ref;Tences: GB:AE001561; GB:AE001439; NID:g4156000; PIDN:AAD06962.1; PID:g415600
                                                                                                                                                                                                                   probable component of cation transport for cbb3-type oxidase - Helicobacter c;Species: Helicobacter pylori A;Varlety: strain J99
C;Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 21-Jan-2000 C;Accession: E71813
R;Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Ives, C.; Gibson, R.; Merberg, D.; Mills, S.D.; Jiang, O.; Taylor, D.E.; V Nature 397, 176-180, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cation-transporting ATPase, P-type - Helicobacter pylori (strain 26695)
(;Species: Helicobacter pylori
C;Date: 09-Aug-1997 #sequence_revision 09-Aug-1997 #text_change 11-Jan-2000
C;Accession: 664707
R;Tomb, J.F.; White, O.; Kerlavage, A.R.; Clayton, R.A.; Sutton, G.G.; Fleischmann, R.D.
Peterson, S.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; McKenne son, J.D.; Kelley, J.M.; Cotton, M.D.; Weidman, J.M.; Fujii, C.; Bowman, C.; Watthey, L.
Nature 388, 539-547, 1997
A;Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser, C.
A;Title: The complete genome sequence of the gastric pathogen Helicobacter pylori.
A;Reference number: A64520; MUID:97394467
A;Accession: G64707
                                                                                                                                         A;Title: Genomic sequence comparison of two unrelated isolates of the human gastric path
A;Reference number: A71800; MUID:99120557
A;Accession: E71813
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A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.
A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete genome A;Reference number: A70500; MUID:98295987
A;Accession: F70592
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Query Match
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A; Residues: 1-1787 <WI2>
A; Cross-references: EMBL:Z67884; PIDN:CAA91810.1; GSPDB:GN00028; CESP:T14G8.1
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A;Reference number: 219955
A;Accession: T24924
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C:Superfamily: Enterococcus copper-transporting ATPase copA; ATPase nucleotide-binc F:612-750/Domain: ATPase nucleotide-binding domain homology <ATN>
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A;Introns: 112/3; 453/3; 597/3; 815/2; 1258/3; 1682/2; 1709/3; 1764/1
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A;Cross-references: EMBL:Z67881; PIDN:CAA91798.1; GSPDB:GN00028; CESP:T14G8.1
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                                                                                           Alitalo K., Stacker S.A.;
"Vascular endothelial growth factor D (VEGF-D) is a ligand tyrosine kinases VEGF receptor 2 (Flk1) and VEGF receptor Proc. Natl. Acad. Sci. U.S.A. 95:548-553(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Lung;
WEDLINE-97349118; PubMed-9205122;
Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
"Molecular cloning of a novel vascular endoth VEGF-D.";
       Stacker S.A., Stenvers K.L., Caesar C., Nice E.C., Roufail S., Simpson R.J., Mo
                                                    PROCESSING, AND SEQUENCE OF 89-94; 100-105 AND MEDLINE-20011413; PubMed-10542248;
                                                                                                                                                                                                                                                                                                                                ROCCHIgiani M., Lestingi M., Luddi A., Orlandini M., Franco Rossi E., Ballabio A., Zuffardi O., Oliviero S.; "Human FIGF: cloning, gene structure, and mapping to chromos between the PIGA and the GRPR genes.";
                                                                                                                                                                                                                           Achen
                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                         MEDLINE=98118549; PubMed=9435229;
                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-98140120; PubMed-9479493;
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-LINKED (GLCNAC. . .) (POTENTIAL).
1261AFA373596C00 CRC64;
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         Moritz R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     354 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
  Vitali A., Domagala T.,
ritz R., Karpanen T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        endothelial growth factor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
1.4;
                                                                          206-213
                                                                                                                                                                   is a ligand for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 326;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                     chromosome
                                                                                                                                           (Flt4)."
                                                                                                                                                                                                                                                                                                                                                                                              В.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
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EMBL; D89630; BAA24264.1; -.
EMBL; Y12863; CAA73370.1; -.
EMBL; Y12864; CAA73371.1; JOINED EMBL; Y12865; CAA73371.1; JOINED EMBL; Y12866; CAA73371.1; JOINED EMBL; Y12866; CAA73371.1; JOINED EMBL; Y12868; CAA73371.1; JOINED EMBL; Y12869; CAA73371.1; JOINED EMBL; Y12869; CAA73371.1; JOINED EMBL; Y12869; CAA73371.1; JOINED EMBL; Y12869; CAA73371.1; JOINED EMBL; Y12870; CAA73371.1; JOINED.
                                                                                             DISULFID DISULFID DISULFID DISULFID
                                           CARBOHYD
CARBOHYD
                                                                                                                                                                     REPEAT
REPEAT
       SEQUENCE
                            CARBOHYD
                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS00278; PDGF_2; 1.
Mitogen; Growth factor; Glycoprotein; Signal; Repeat; Mitogen; Growth factor; Glycoprotein; Signal; Repeat;
                                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD001629; PDGF; SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                    PROPEP
                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                     Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AJ000185; CAA03942.1; MIM; 300091; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -i- PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP; P15692; 1VPP.
InterPro; IPR000072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/

    -!- SUBUNIT: Homodimer; non-covalent and antiparallel.
    -!- SUBCELLULAR LOCATION: Secreted.
    -!- TISSUE SPECIFICITY: Highly expressed in lung, heart, small intestine and fetal lung, and at lower levels in skeletal muscle,

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proteolytic processing which generates non-covalent homodimers.";
J. Biol. Chem. 274:32127-32136(1999).
-!- FUNCTION: Growth factor active in angiogenesis, lymphangiogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Biosynthesis of vascular endothelial growth factor-D involves
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bound by non-covalent interactions.
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (Flk1) and VEGFR-3 (Flt4) receptors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        colon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and pancreas.
                                                                                                                                                                                                                                                                                                                                                   pair of basic
                                                                                                                                                                                                                                                                                                                                                                                                                                       PDGF; 1.
                                        237
273
293
318
318
1153
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1191
1191
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1185
       40444
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       ¥.
                                                                                                                                                                                                                                                                                                                                             residues; Multigene
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
1-LINKED (GLCNAC. . .) (POTENTIAL).
2048D769D735173E CRC64;
                                                                  INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-IINTER (INTERCHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                    4 X 16 AA REPEATS
                                                                                                                                                                                                                                                                                                         OR 99 (IN A MINOR FORM)
                                                                                                                                                                                                                                                                                          VASCULAR ENDOTHELIAL GROWTH FACTOR
                                                                                                                                                                                                                                          X(1,3)-C
                                                                                                                                                                                                                       (APPROXIMATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in angiogenesis, lymphangiogenesis
                                                                                                                                                                                                                                                                                                                                               family.
                                                                                                                                                                                                                                                     OF C-X(10)-C-X-C
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Query Match

Score 43;

В

Length 354

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В
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VEGD_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Lecal Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precurso
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  growth factor) (FIGF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P97946;
01-MAR-2002 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-98288130; PubMed=9622638; Avantaggiato V., Orlandini M., Acampora D., Oliviero S., Simeone A.; Embryonic expression pattern of the murine figf gene, a growth fact belonging to platelet-derived growth factor/vascular endothelial belonging to platelet-derived growth factor/vascular endothelial growth factor family ";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-97349118; PubMed-9205122;
Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
"Molecular cloning of a novel vascular endothelial growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Orlandini M., Marconcini L., Ferruzzi R., Oliviero S.; "Identification of a c-fos-induced gene that is related to platelet-derived growth factor/vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=C57BL/6J; TISSUE=Fibroblast; MEDLINE=97030254; PubMed=8876195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FIGF OR VEGFD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VEGD_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    168
                                                                                                                                                                       J. Biol. Chem. 276:19166-19171(2001).

J. Biol. Chem. 276:1916-19171(2001).

J. Biol. Chem. 276:19166-1917(2001).

J. Biol. Chem. 276:19166-1917(2001).

J. Biol. Chem. 276:19166-1917(2001).

J. Biol. Chem. 276:19166-1917(2001).

J. Biol. Chem. 276:1916-1917(2001).

J. Biol. Chem. 276:1916-1917(2001).

J. Biol. Chem. 276:1916-1917(2001).

J. Biol. Chem. 276:1917(2001).

J.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genomics 42:483-488(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEVELOPMENTAL STAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=21276411; PubMed=11279005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RECEPTOR SPECIFICITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 ISVPLTSVP 10
                                                                       acoustic ganglion, teeth, heart, anterior pituitary as well lung and kidney mesenchyme, liver, derma, and periosteum of vertebral column.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ISVPLTSVP 176
PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity towar
                                                                                                                                                            DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in body structures and organs of the embryo such as limb
                                                        INDUCTION: By the transcription factor c-fos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Natl. Acad. Sci. U.S.A. 93:11675-11680(1996).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    358 AA
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                                                                                                            untary as well as periosteum of the
           activity toward
                                                                                                                                                                     buds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProDom; PDUviv-
ProDom; PDUviv-
SMART; SM0014; PDGF; i.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
PROSITE; PS50278; PDGF_1; 1.
PROSITE; PS50278; PDGF_1; 1.
PROSITE; PDVV
PROSITE; PDVV
PROSITE; PDGF; i.
PROSITE; PDGF, i.
PROSITE; PDGF, i.
PROSITE; PDGF; i.
PROSITE; PDGF; i.
PROSITE; PDGF; i.
PROSITE; PS50249; PDGF_1; 1.
PROSITE; PS50249; PDGF_2; 1.
PROSITE; PS50278; PDGF_2; P
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DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                   p35624; O9TTB3; Q9TTB9;
01-JUN-1994 (Rel. 29, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Metalloproteinase inhibitor 1 precursor (TIMP-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000072; PDC
Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; X99572; CAA67892.1; -. EMBL; D89628; BAA14002.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MGD; MGI:108037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP;
                                                                                                                                                                                                                                                                                                                                      _PIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
MEDLINE-92201478; PubMed-1312961;
                       TISSUE=Ovary
                                                                                                                                Sus scrofa (Pig).
Eukaryota; Metazoa;
                                                                                                                                                                               TIMP1
                                                                                                                                                                                                                                                                                                             TIM1_PIG
                                          SEQUENCE FROM N.A.
                                                                                    NCBI_TaxID=9823;
                                                                                                                Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                          173 ISVPLTSVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDS) bound by non-covalent interactions (By similarity). SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 ISVPLTSVP 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P15692; 1VPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e on pair of basic r
1 21
22 93
94 210
211 358
227 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
9; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A.
                                                                                                                                                                                                                                                                                                               STANDARD;
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150
160
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194
196
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                                                                                                                Cetartiodactyla;
                                                                                                                                       Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PDGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 43; pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VASCULAR ENDOTHELIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X 16 AA REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (APPROXIMATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6636B17FBF07037C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                Suina; Suidae;
                                                                                                                                                                                                                                                                                                                    207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
1.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 358;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           by and for commercial
                                                                                                                    SuS
                                                                                                                                       Euteleostomi;
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RESULT 5T
V110_FOWPV
ID V110_F
AC P36700
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                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 6
V110_FOWPV
P36700; Q9J5B2;
                                                                                                                                                                                                                                                                                     CONFLICT
                                                                                                                                                                                                                                                                                                                                        CHAIN
DISULFID
DISULFID
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DISULFID
DISULFID
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CARBOHYD
CARBOHYD
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00965; TIMP; 1.
SMART; SM00206; TIMP; 1.
PROSITE; PS00288; TIMP; 1.
                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; S96211; AAB21865.1; -. EMBL; AF201726; AAF24348.1; -. EMBL; AF156029; AAF17354.1; -. HSSP; P01033; 1UEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Glycoprotein; Metalloprotease inhibitor; Erythrocyte maturation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001820; TIMP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang J.Y., Baer A.E., Kraus V.B., Setton L.A.; "Gene expression level of mmp3 and Timp1 in in Submitted (NOV-1999) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <del>-</del>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 34-195 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression of the porcine collagenase inhibitor gene in functional corpora lutea.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tanaka T., An "Differential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 37-144 FROM N.A.
                                                                                                                                                    1 CISVPLTSVPC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Loning and sequencing of porcine TIMPs.";

mitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.

FUNCTION: COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)

SUBCELLULAR LOCATION: Secreted.

PTM: THE ACTIVITY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE TIMP FAMILY.
                                                                                                              CIVFPCISIPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SULFIDE BONDS
                                                                                                                                                                                          Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   non-profit institutions as long
                                                                                                                                                                                                                                                                                     141
207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Andoh N., Takeya T., Sato E.; lal screening of ovarian cDNA libraries detected the
                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Endocrinol. 83:65-71(1992).
                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                     ₽,
                                                                                                                160
                                                                                                                                                                                                                                                                                                                    23
207
93
122
147
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197
160
189
53
101
34
37
41
86
                                                                                                                                                                                                                                                                                 23098 MW;
                                                                                                                                                                                                       63.9%;
54.5%;
                                                                                                                                                                                                                                                                                               METALLOPROTEINASE INHIBITOR 1.
BY SIMILARITY.
BY SI
                                                                                                                                                                                                   Score 39; DB 1;
Pred. No. 4.7;
             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BY SIMILARITY
                                                                                                                                                                                                                                                                               B04895846EB56BD0
                                                                                                                                                                                      Mismatches
               451
                                                                                                                                                                                                                                                                                         REF. 3).
               B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          intervertebral disc.";
                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        databases
                                                                                                                                                                                                                     Length 207;
                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                0;
                                                                                                                                                                                Gaps
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AIM1_HUMAN
ID AIM1_H
AC Q9Y4K|
AC Q9Y4K|
DT 16-OCT
DT 16-OCT
DE Absent
GN AIM1.
OS HOMO S
OC EUKARY,
OC Mammal
OX NCBI_T
RN [1]
RP SEQUEN
RC TISSUE
RX MEDLIN
RA RAY M.
RT SUPERT
RT SUPERT
RT SUPERT
RT MAIM1,
RT SUPERT
RT SUPERT
CC -1- FU
CC -1- SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; craniaca, ve
Mammalia; Eutheria; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                         AIM1_HUMAN
Q9Y4K1; 000296;
16-OCT-2001 (Re
                                                                                                     Ray M.E., Wistow G., Su Y.A., Meltzer P.S., Trent J.M., "AIM1, a novel non-lens member of the betagamma-crystallin
                                                                                                                                                                                                                                                                                                    16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                         malignant melanoma.";
                                                                                        superfamily,
                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                          Absent in melanoma 1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
PIR; §
                                                                                                                                       MEDLINE-97250519; PubMed-9096375;
                                                                                                                                                                                                           NCBI_TaxID=9606
                                                                                                                                                                                                                                                          Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Ogawa R., Calvert J.G., Yanagida N., Nazerian K.;
"Insertional inactivation of a fowlpox virus homologue of vaccinia virus F121 gene inhibits the release of enveloped J. Gen. Virol. 74:55-64(1993).
-i- SIMILARITY: BELONGS TO THE POXVIRUSES F11 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-1994
16-OCT-2001
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF198100; AAF44454.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=20193820; PubMed=10729156; Afonso C.L., Tulman E.R., Lu Z., Z "The genome of fowlpox virus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-151 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=93139784;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Avipoxvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOWLPOX virus (FPV).
Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FPV110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein FPV110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            90 CINIPIDSIP 99
C. Natl. Acad. Sci. U.S.A. 94:3229-3234(1997).
FUNCTION: MAY FUNCTION AS SUPPRESSOR OF MALIGNANT MELANOMA. EXERT ITS EFFECTS THROUGH INTERACTIONS WITH THE CYTOSKELETON SIMILARITY: BELONGS TO THE BETA/GAMMA-CRYSTALLIN FAMILY. CONTINUITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CISVPLTSVP 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; M88588; AAA471
$27935; $27935.
PQ0506; PQ0506.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            451 AA;
                                                                                       is associated with the control
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(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA47188.1;
                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29,
40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=8380837;
                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52010 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 39;
                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         664623EA83D3A331 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stage; Poxviridae; Chordopoxvirinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zsak L., Kutish G.F., Rock D.L.;
                                                                                                                                                                                                                                                                                                                                                                        1723 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
                                                                                                                                                                                                                         Hominidae;
                                                                                   of tumorigenicity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of enveloped virions.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 451;
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                                                                                     in human
                                    IT MAY
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00652; Ricin_b_tectui, PRINTS; PR01367; BGCRYSTALLIN.
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Pfam; PF00652; Ricin_B_lectin; 5.
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                                                                                                                                                                                                               SEQUENCE FROM N.A.

Dietrich F.S., Mulligan J., Allen E., Araujo R., Aviles E., Berno Carpenter J., Chen E., Cherry J.M., Chung E., Duncan M., Hunicke-Smith S., Hyman R., Komp C., Kashkari D., Lew H., Lin D., Mosedale D., Nakahara K., Namath A., Oefner P., Oh C., Petel F.X., Roberts D., Schramm S., Schroeder M., Shogren T., Shroff N., Winant A., Yelton M., Botstein D., Davis R.W.;

Winant A., Yelton M., Botstein D., Davis R.W.;

Submitted (DEC-1995) to the EMBL/GenBank/DDBJ databases.
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Q03034;
Q03034;
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Q03034;
Q03034;
Q03036 (Rel. 39, Created)
Q030487-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Hypothetical 56.2 kDa protein in PAD1-YRF1 intergenic region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saccharomycetales;
NCBI_TaxID=4932;
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                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Fungi; Ascomycota; Saccharomycotina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Saccharomyces cerevisiae (Baker's yeast).
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CRYSTALLIN BETA/GAMMA-LIKE 4
CRYSTALLIN BETA/GAMMA-LIKE 5
CRYSTALLIN BETA/GAMMA-LIKE 6
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CRYSTALLIN BETA/GAMMA-LIKE 6
RICIN B-TYPE LECTIN.
MW; 7E50F681A627FB09 CRC64;
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p58021;
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16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: IN THE INTRACELLULAR COMPARTMENTS, MAY FUNCTION CHANNEL OR SMALL MOLECULE TRANSPORTER (BY SIMILARITY).
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                                                                                                                                                                                                                                                                                  Signal;
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                                                                                                                                                                                                                                                                                                                                                                                                               between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a use by non-profit institutions as long as i modified and this statement is not removed. Us
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Pred. No.
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RESULTY 9
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                                                                                                                                                                                                                                                                                                                                                            Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                              TRANSMEM
                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein that is highly conserved throughout evolution. Gene 216:311-318(1998).
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                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR004240; EMP70. Pfam; PF02990; EMP70; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MIM; 604678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -1- FUNCTION: IN THE INTRACELLULAR COMPARTMENTS, MAY FUNCTION CHANNEL OR SMALL MOLECULE TRANSPORTER.
-1- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN. ENDOSOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Characterization of a 76 kDa endosomal, multispanning membrane "Characterization of a 76 kDa endosomal" "Characterization" "Characterization of a 76 kDa endosomal" "Characterization" "Char
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DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U81006; AAB38973.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-98398453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID-9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
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les 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: BELONGS TO THE NONASPANIN (TM9SF) FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE SPÉCIFICITY: UBIQUITOUSLY EXPRESSED. ESPECIALLY ABUNDANT IN PANCREAS, HIGHLY EXPRESSED IN KIDNEY, LOWER LEVELS IN HEART, BRAIN, SKELETAL MUSCLE AND PLACENTA. LOWEST EXPRESSION IN LUNG AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CISVPLTSV 9
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77.8%;
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Pred. No. 23;
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POTENTIAL.
CYTOPLASMIC (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi;
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                   Pfam; PF00385; Chromo; 1.
Pfam; PF00271; helicase_C; 1.
Pfam; PF00628; PHD; 2.
Pfam; PF00176; SWF2_N; 1.
SMART; SM00298; CHROMO; 2.
SMART; SM00487; DEXDC; 1.
SMART; SM00480; HELICC; 1.
SMART; SM00490; HELICC; 1.
SMART; SM00249; HELICC; 2.
SMART; SM00184; RING; 2.
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DOMAIN
                                                                                                                                                                                                                                                         InterPro; IPR001841; Znf_ring.
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                                                                                                                                                                                                                                                                                        InterPro; IPR000330;
                                                                                                                                                                                                                                                                                                                InterPro; IPR001965;
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DEAH\_ATP\_HELICASE;

PHD.

SNF2\_N.

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InterPro; IPR000953; Chromo.
InterPro; IPR001410; DEAD.
InterPro; IPR002464; DEAH_ATP_helicase.
InterPro; IPR001650; Helicase_C.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matthews P., McMurray A.;
Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.
-i- SUBCELLGULAR LOCATION: Nuclear (Potential).
-i- SIMILARITY: BELONGS TO THE SNF2/RAD54 HELICASE FAMILY.
-i- SIMILARITY: CONTAINS 2 PHD-TYPE ZINC FINGERS.
-i- SIMILARITY: CONTAINS 2 'CHROMO' DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                            EMBL; Z67884; CAA91810.1; -. EMBL; Z67881; CAA91810.1; JOINED.
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Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                  WormPep; T14G8.1;
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                                                                                                                                                                                                                                                                                               Z67881; CAA91798.1; -
Z67884; CAA91798.1; JOINED.
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Pred. No. 23;
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15-JUL-1998 (Rel. 36, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation updat
Mating type pheromone BBP1(2) precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J98; CHROMO_1;

J0013; CHROMO_2; 1.

J0013; CHROMO_2; 1.

J0013; CHROMO_2; 1.

J0013; CHROMO_2; 1.

J0124; 10.

J0124; 21.

J024; 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical 
ATP-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00598; PROSITE; PS50013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vaillancourt L.J., Raudaskoski M., Specht C.A., Raper C.A.; "Multiple genes encoding pheromones and a pheromone receptor define the B beta 1 mating-type specificity in Schizophyllum commune."; Genetics 146:541-551(1997).
-I- FUNCTION: ACTIVATES B-REGULATED DEVELOPMENT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Fungi; Basidiomycota; Hymenomyce Stereales; Schizophyllaceae; Schizophyllum. NCBI_TaxID=5334;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCHCO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schizophyllum commune (Bracket fungus).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BBP1(2)
                                                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=97321284; PubMed=9178005; Vaillancourt L.J., Raudaskoski M.
                                                                                                                                                                                                                                                                                      Prenylation; Lipoprotein; Pheromone
                                                                                                                                                                                                                                                                                                              EMBL; U74495; AAB41860.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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les 6; Conserv
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                                                                                                  Local Similarity
  42 SAPLTEAPC 50
                                     ω
                                     SVPLTSVPC 11
                                                                                                                                                                                     65 AA;
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                                                                                 Conservative
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62
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                                                                                                                                                                                     6780 MW;
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PHD-TYPE 1.
PHD-TYPE 2.
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                                                                                                  Score 36;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 37;
                                                                                                                                                                                     FARNESYL (POTENTIAL).
3341013317AD6065 CRC64;
                                                                                                                                                                                                                        POTENTIAL.

MATING-TYPE PHEROMONE BBP1(2).

REMOVED IN MATURE FORM (POTENTIAL).
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Matches 5; Conserv
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Q57959;
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MEDLINE-96337999; PubMed-8688087;

Bult C.J., White O., Olsen G.J., Zhou L., Fleischmann R.D.,

Sutton G.G., Blake J.A., FitzGerald L.M., Clayton R.A., Gocayne J.D.,

Kerlavage A.R., Dougherty B.A., Tomb J.-F., Adams M.D., Reich C.I.,

Overbeek R., Kirkness E.F., Weinstock K.G., Merrick J.M., Glodek A.,

Scott J.L., Geoghagen N.S.M., Weidman J.F., Fuhrmann J.L., Nguyen D.,

Utterback T.R., Kelley J.M., Peterson J.D., Sadow P.W., Hanna M.C.,

Cotton M.D., Roberts K.M., Hurst M.A., Kaine B.P., Borodovsky M.,

Klenk H.-P., Fraser C.M., Smith H.O., Woese C.R., Venter J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1997 (Rel. 35, Created)
15-JUL-1998 (Rel. 36, Last sequal terror of the control of the co
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Methanococcus
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InterPro; IPR002904; tRNA-synt_Iys_1.
Pfam; PF01921; tRNA-synt_If; 1.
PROSITE; PS00178; AA_TRNA_LIGASE_I; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -|- CATALYTIC ACTIVITY: ATP + L-lysine + tRNA(Lys) = AMP + diphospha + L-lysyl-tRNA(Lys).
+ L-lysyl-tRNA(Lys).
-|- SUBCELULAR LOCATION: Cytoplasmic (By similarity).
-|- SIMILARITY: BELONGS TO CLASS-I AMINOACYL-TRNA SYNTHETASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Science 273:1058-1073(1996).
-|- CATALYTIC ACTIVITY: ATP + L-lysine + tRNA(Lys) = AMP + diphosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Complete genome sequence of the methanogenic archaeon, Methanococcus jannaschii.";
                                                                            15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Lysyl-trna synthetase (EC 6.1.1.6) (Lysine--trna ligase) (LYSRS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
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Methanococcus maripaludis
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61921 MW;
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Last annotation update)
(EC 6.1.1.6) (Lysine--tRNA ligase) (LYSRS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein biosynthesis; Ligase; ATP-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 36; DB Pred. No. 42; 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "HIGH" REGION.
"KMSKS" REGION.
; 5811837C8A349E9C CRC64;
                                                                                                                                                                                                                                                                                                       PRT;
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Best Local
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                               TRYBB
This SWISS-PROT entry is
                                                                                                                                                                                                                                         Alkyldihydroxyacetonephosphate synthase (EC 2.5.1.26) (Alkyl-DHAP synthase) (Alkylglycerone-phosphate synthase).
                                                                                                                                                                                                                                                                 16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetases.";
Science 278:1119-1122(1997).
-I- CATALYTIC ACTIVITY: ATP + L-lysine + tRNA(Lys) = AMP + diphosphate
- L-lysyl-tana(Lys).
- L-lysyl-tana(Lys).
- Cytoplasmic (By similarity).
                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                        Eukaryota; Euglenozoa;
NCBI_TaxID=5702;
                                                                                                                                                                                                                               synthase) (Alkylglycerone-phosphate
Trypanosoma bruce1 bruce1.
                                                                                                                                                                                                                                                                                                                ADAS_TRYBB
097157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aminoacyl-trnA synthetase; Protein biosynthesis; Ligase; ATP-binding.

SITE 28 36 "HIGH" REGION.

SITE 278 282 "KMSKS" REGION.

CONFLICT 11 11 I -> L (IN REF. 1; AA SEQUENCE).

SEQUENCE 533 AA; 61273 MW; 007FA8668A57A0AC2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00178; AA_TRNA_LIGASE_I; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AF009824; AAB87410.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ibba M., Morgan S., Curnow A.W., Pridmore Gardner W., Lin W., Woese C.R., Soell D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=98016282; PubMed=9353192;
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                            FAMILY 4.
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Pro; IPR002904; tRNA-synt_lys_1.
PF01921; tRNA-synt_lf; 1.
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                          J. Biol. Chem. 264:17445-17453(1989)
                                                cells."
                                                                                                                                                                    Balcerzak D., Querengesser L., Dixon W.T., Baracos V.E., "Involvement of fibroblasts and muscle cells in the expression extracellular proteolytic cascade in bovine skeletal muscle.";
                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE-94257757; PubMed=8199264;
Satoh T., Kobayashi K., Yamashita S., Kikuchi M., Sendai Y.,
"Tissue inhibitor of metalloproteinases (TIMP-1) produced by
"Tissue inhibitor cells enhances in vitro development of
                                                           metalloproteinase inhibitors secreted
                                                                         de Clerck Y.A., Yean T.D., Ratzkin B.J., Lu H.S., "Purification and characterization of two related
                                                                                                        MEDLINE=90008914; PubMed=2551903;
                                                                                                                                                                                                                                                                     Biol.
                                                                                                                                                                                                                                                                                                                                                                                                          Freudenstein J., Wagner S., Luck R.M., Einspanier R., S "mRNA of bovine tissue inhibitor of metalloproteinase: expression in bovine ovarian tissue.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Cetartioda
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIM1_BOVIN STANDARD; PRT; 207 AA P20414; Q9TVB0; C1-FEB-1991 (Rel. 17, Created) 01-FEB-1991 (Rel. 17, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update)
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                                                                                                                           PRELIMINARY SEQUENCE OF 24-69
                                                                                                                                                         Submitted (APR-1999) to the EMBL/GenBank/DDBJ
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Pfam; PF02913; FAD-oxidase_C; 1.

Pfam; PF01565; FAD_binding_4; 1.

Lipid synthesis; Transferase; Flavoprotein; FAD; Peroxisome.

Lipid synthesis; Transferase; MICROBODY TARGETING SIGNAL (POTENTIAL).

STTE 611 613 614 615 MW; 27BA9FBF2EB94E3A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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Metalloproteinase inhibitor 1 precursor (TIMP-1) (Embryogenin-1) (EG-
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InterPro; IPR001575; Oxid_FAD_bind.
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AND IRREVERSIBLY INACTIVATES
                  FUNCTION:
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PIR; A35685; A35685
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HSSP; P01033; 1UEA.
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PTM: THE ACTIVITY OF TIMP-1 IS DEPENDENT ON THE PRESENCE OF DISULFIDE BONDS.
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Q9GLX1; PREMBLRel. 16, Created)
01-MAR-2001 (TrEMBLRel. 16, Last sequence update)
01-DEC-2001 (TrEMBLRel. 19, Last annotation update)
VASCULAR ENDOTHELIAL GROWTH FACTOR-D (FRAGMENT).
VEGF-D.
                                                                                                                                            InterPro; IPR004153; CXCXC.
InterPro; IPR000072; PDGF.
Pfam; PF03128; CXCXC; 2.
                                                                                                                                                                       TISSUE-LUNG;
Mandriota S.J., Pepper M.S.;
Submitted (CCT-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF099135; AAAG29747.1; -.
                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovinae; Bos.
                                                                                                                                    ProDom; PD001629; PDGF; 1.
                                                                                                                                                                                                                                               NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                           Bos taurus (Bovine).
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                                           Local Similarity hes 9; Conserv
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122 AA;
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Q1-DEC-2001 (TrEMBLrel. 19, Last annotation
HYPOTHETICAL 39.9 KDA PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001
01-DEC-2001
01-DEC-2001
                                           "Direct Submission.";
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ
EMBL; AF078157; AAG24081.1; .
InterPro; IPR003003; 7TM_chemorecept_2.
InterPro; IPR000168; 7TM_nematode.
Pfama, PF01504; 7tm_5; 1.
                                                                                                                                                                                                                                                                                       STRAIN-BKL5.... Wilson R., Bradshaw H.;
"The sequence of C. elegans
"The sequence of C. the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Chromadorea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
MEDLINE-99069613; PubMed-9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kirkin V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J., Pepper M.S., Giannis A., Sleeman J.P.; "Characterization of indolinones which specifically inhibit VEGF-C-and VEGF-D-induced activation of VEGFR-3 but not VEGFR-2."; Eur. J. Biochem. 0:0-0(2001).
EMBL; AY03728; AR496008.1; -.
SEQUENCE 326 AA; 37106 MW; D7CAEBA6C9FABB7D CRC64;
                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                          "Genome sequence of the nematode C. elegans: a investigating biology. The C. elegans Sequencing Science 282:2012-2018(1998).
  SEQUENCE
                                                                                                                                                                                                Waterston R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29GUB7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q912E4
                           Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID-6239;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-SPRAGUE-DAWLEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Rat).
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nes 9; Conser
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  348 AA;
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39882 MW;
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                                                                                                                                                                                                                                                                                            cosmid F25E5.";.
EMBL/GenBank/DDBJ
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata;
Sciurognathi; Muridae
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456DEC8833CF3176 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
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Sequencing Consortium.";
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; Murinae; Rattus.
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RESULT

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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
HYPOTHETICAL TRANSMEMBRANE PROTEIN L8032.05A.
                                                          TISSUE-PRE-TCELL;

MEDLINE-99099250; PubMed-9880673;

Fujimori A., Matsuda Y., Takemoto Y., Hashimoto Fukumura R., Mita K., Tatsumi K., Muto M.;

"Cloning and mapping of Np95 gene which encodes protein associated with cell proliferation.";
                                                                                                                                                                                                                                                                                                                Q921H6;
Q921H6;
Q1-MAY-1999 (TrEMBLrel. 10, Created)
Q1-MAY-1999 (TrEMBLrel. 10, Last sequence update)
Q1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
NUCLEAR PROTEIN NP95 (NUCLEAR ZINC FINGER PROTEIN NP95).
NP95 OR UHRFI.
                                        Mamm.
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EMBL; AL139794; CAC22646.1; -.
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                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9Z1H6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Transmembrane.
SEQUENCE 208 AA;
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Smith D.F.;
SEQUENCE FROM N.A.
                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases
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Eukaryota; Euglenozoa; Kinetoplastida;
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                                          Genome 9:1032-1035(1998).
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7; Conserv
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Barrell B.G.;
                                                                                                                                                                                                                                                            Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23200 MW;
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54.5%;
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Pred. No.
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Pred. No. 11;
                                                                                                                                                                                                                                                          Craniata; Vertebrata; I
Sciurognathi; Muridae;
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                                                                                     novel nuclear
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                                                                                                                                                                                                                                                            Murinae;
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InterPro; IPRO01841; Znf_ring.

Pfam; PF002182; G9a; 1.

Pfam; PF00240; ubiquitin; 1.

Pfam; PF00240; ubiquitin; 1.

Pfam; PF00628; PHD; 1.

SMART; SM00466; G9a; 1.

SMART; SM00249; PHD; 1.

SMART; SM00184; RING; 2.

SMART; SM00184; RING; 2.

SMART; SM00213; UBQ; 1.

R PROSITE; PS0023; UBUQUITIN_2; 1.

PROSITE; PS0023; UBIQUITIN_2; 1.

PROSITE; PS0053; UBIQUITIN_2; 1.

PROSITE; PS0053; UBIQUITIN_2; 1.

PROSITE; PS0053; UBIQUITIN_2; 1.

PROSITE; PS0053; UBIQUITIN_2; 1.
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Best Local
                                                                                                                                                                                                                                                                      Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Y., Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A., Kosug Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;

"Complete genome sequence of an aerobic hyper-thermophilic crenarchaeon, Aeropyrum pernix KI.";
DNA Res. 6:83-101(1999).
EMBL; AP000064; BAAB1385.; --
Hypothetical protein. Complete proteome
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01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2001 (TrEMBLrel. 16, Last annotation updat
HYPOTHETICAL 17.4 KDA PROTEIN APE2372.
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InterPro; IPR003105; G9a.
InterPro; IPR000566; Lipocln_cytFABP.
InterPro; IPR001965; PHD.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=K1;
MEDLINE=99310339; PubMed=10382966;
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                                                                                                                                                                                                                             Hypothetical protein; Complete proteome. SEQUENCE 169 AA; 17432 MW; 9BDB7147C7B1426A CRC64;
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Q9PY69;
01-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oryza sativa (Rice).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
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                                                                                                                                                                                                                                           Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases. EMBL; AP000364; BAA81763.1; -. InterPro; IPR004240; EMP70. Pfam; PF02990; EMP70; 1. SEQUENCE 661 AA; 74533 MW; 612242C132F68E8E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=CV. NIPPONBARE;
Sasaki T., Matsumoto T., Yamamoto K.;
Oryza sativa nipponbare(GA3) genomic DNA, chromosome 8,
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Pfam; PF01577; Poty_P1; 1.
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70.0%;
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                                                                                              DB . 48;
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                                                                                                                                             Length 661;
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CISVPLTLV 486

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RESULT
1096096
ID 906096
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Q9HDV4
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Best Local
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Best Local
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Q96QW6;
Q96QW6;
Q1-DEC-2001 (TrEMBLrel. 19, Created)
Q1-DEC-2001 (TrEMBLrel. 19, Last sequence update)
Q1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Q1-DEC-2001 (TREMBLREL. 19, Last annotation update)
Q148K1.1.1 (ABSENT IN MELANOMA 1, ISOFORM 1) (FRAGMENT).
    Q9HDV4
                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (JAN-2000) to the EMBL/
EMBL; AL137701; CAB70882.1; -
HSSP; P02649; INFO.
InterPro; IPR000719; Euk_pkinase.
Pfam; PF00069; pkinase; 1.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalla; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation updat
HYPOTHETICAL 118.8 KDA PROTEIN.
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01-OCT-2000 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                          NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
Cobley V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATP-binding; Hypothetical protein; SEQUENCE 1062 AA; 118780 MW; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-TESTIS;
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                                                                                                                   395 CVQSPISSFPC
                                                                                                                                                                                                        Local Similarity
nes 5; Conserv
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                                                                                                                                                          1 CISVPLTSVPC 11
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6; Conser
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1411 AA;
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PRELIMINARY;
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66.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>ب</u>
                                                                                                                                                                                                                                Score 39;
Pred. No.
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
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                                                                                                                                                                                                                                                                                                                         C1B36DD23F428C67 CRC64;
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A4B2B359EEC9CAAD CRC64;
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No.
1513
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75;
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                                                                                                                                                                                                                                                   Length 1411;
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             Query Match
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Best Local
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O09411;
01-JUL-1997 (TrEMBLrel. 04, Cre
01-JAN-1998 (TrEMBLrel. 05, Las
01-DEC-2001 (TrEMBLrel. 19, Las
CHITIN SYNTHASE 1 (FRAGMENT).
                                                                                                                                                       Tsujimoto H., Hasegawa A.;
"Phylogenetic analysis of 8 dermatophyte
gene 1 sequences.";
                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=VUT-4006;
MEDLINE=98131180; PubMed=9470404;
                                                                                                                                                                                                                                                         Eukaryota; Fungi; Ascomycota; Pezizomycotina; Onygenales; Arthrodermataceae; Arthroderma. NCBI_TaxID=63401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SI
PROSITE;
                                                    SEQUENCE
                                                                                            ProDom;
                                                                                                     InterPro; IPR002923; Chitin_synth
Pfam; PF01644; Chitin_synth; 1.
                                                                                                                              Mucoses 40:411-414(1997).
EMBL; AB003559; BAA20947.1;
                                                                                                                                                                                                                                                                                                       Arthroderma fulvum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00501; BRIGHT; 1.
SMART; SM00249; PHD; 3.
SMART; SM00184; RING; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001841; Znf_ring.
Pfam; PF02373; jmjC; 1.
Pfam; PF00628; PHD; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rajandream M.A., Barrell B.G.;
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AL512495; CAC19756.1;
Interpro; IPR001506; ARID.
Interpro; IPR001345; cytC_heme_bind.
Interpro; IPR001347; JmjC.
Interpro; IPR001347; JmjC.
Interpro; IPR001345; PHD.
Interpro; IPR001965; PHD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
PUTATIVE TRANSCRIPTIONAL REGULATORY PROTEIN, PHD FINGER.
SPBP19All.06.
                                                                  NON_TER
                                                                             NON_TER
                                                                                                                                                                                               Kano R., Nakamura Y., Watari T., Watanabe S.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schizosaccharomyces.
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Eukaryota; Fungi; Ascomycota; Schizosaccharomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                297 CLDPPLTSIP 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
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                                                                                        PD002998; Chitin_synth;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 6; Conserv
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                                                   207
207 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CYTOCHROME_C; UNKNOWN_1
A; 172257 MW; B87876241
                                                   22580 MW;
62.3%;
87.5%;
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                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                     Created)
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 39; DB 3; Pred. No. 1e+02;
                                                    47B2E8FBD6499541 CRC64;
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 38;
No.
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 DB
25;
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                                                                                                                                                                                               Takahashi
                                                                                                                                                                                                                                                                                        Eurotiomycetes;
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             Length 207;
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A CONTROL OF THE PROPERTY OF T
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016608
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Best Local
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Q68691;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Viruses; ssRNA positive-strand viruses, Hepacivirus. NCBI_TaxID=31651;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996 (TREMBLIEGL. 01, 01-NOV-1996 (TREMBLIEGL. 01, 01-DEC-2001 (TREMBLIEGL. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORE PROTEIN (FRAGMENT).
Hepatitis C virus type 2c.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O16608;
O1-JAN-1998 (TrEMBLrel. 05, Created)
O1-JAN-1998 (TrEMBLrel. 05, Last sequence update)
O1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
HYPOTHETICAL 37.0 KDA PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and molecular analysis of untypeable samples."; Virus Res. 38:137-157(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stuyver L., Wyseur A., van Arnhem W., Lunel F., Laurent-Puig Pawlotsky J.-M., Kleter B., Bassit L., Nkengasong J., van Do
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=96118171; PubMed=8578855;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; L38324; AAC42179.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maertens G.
                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Caenorhabditis elegans.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *Hepatitis C virus genotyping by means of 5'-UR/core line probe assays
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                                         Henkhaus J., Wohldmann P., Beck C.; "The sequence of C. elegans cosmid Submitted (AUG-1997) to the EMBL/Ge
                                                                                                                                                                            "Genome sequence of the nematode C. elegans: a investigating biology. The C. elegans Sequencir Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=BRISTOL N2;
MEDLINE=99069613; PubMed=9851916;
SEQUENCE FROM N.A
                                                                                                               STRAIN-BRISTOL N2;
                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   184 CISVPVSSV 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 VPLTSVPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CISVPLTSV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192
318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  >318
318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34463 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ?
                                                EMBL/GenBank/DDBJ databases
                                                                      cosmid C49Dl0.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORE PROTEIN.
E1 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E7A5F7DE5B6A34FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; DB
. 37;
                                                                                                                                                                                                           Sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA stage; Flaviviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                               platform for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 318;
                                                                                                                                                                                                         Consortium.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Doorn
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        L.-J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
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RC RAT RT DR DR DR DR DR DR CW
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                  InterPro; IPRO00152; Asx_hydroxyl.
InterPro; IPRO00561; EGF-like.
InterPro; IPRO01881; EGF_Ca.
InterPro; IPRO01304; lectin_c.
Pfam; PP00008; EGF; 8.
Pfam; PP00008; EGF_CA; 1.
SMART; SM000179; EGF_CA; 1.
PROSITE; PS00010; ASX_HYDROXYL; 1.
PROSITE; PS00155; C_TYPE_LECTIN_1; UNKNOWN_1.
PROSITE; PS00186; EGF_1; UNKNOWN_7.
PROSITE; PS00186; EGF_1; UNKNOWN_7.
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Direct Submission.";
Submitted (SEP-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF016665; AAC71178.1; -.
InterPro; IPR003003; 7TM_chemorecept_2.
InterPro; IPR000168; 7TM_nematode.
Pfam; PF01604; 7tm_5; 1.
Hypothetical protein.
Hypothetical protein.
SEQUENCE 324 AA; 37015 MW; AA9BB3ED4D2DD926 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q20852;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation updat
HYPOTHETICAL 66.0 KDA PROTEIN.
                                                                                                                                                                                                                                                                                                           STRAIN-BRISTOL N2;
Murray J., Le T.T.;
"The sequence of C.
submitted (MAY-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-BRISTOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Waterston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q20852
                                                                                                                                                                                                        "Direct Submission.";
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; U58750; AAB00653.1; -.
HSSP; P01132; 1EGF.
                                                                                                                                                                                                                                                                                                                                                                               "Genome sequence of the nematode C. elegans: a plinvestigating biology. The C. elegans Sequencing Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=BRISTOL N2;
MEDLINE=99069613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rhabditidae; Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
                                               PROSITE;
EGF-like
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=6239;
                                                                                                                                                                                                                                                            Waterston R.;
                                                                                                                                                                                                                                                                   STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70 CIGVPYLHLPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CISVPLTSVPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 6; Conserv
                                                               domain,
                                                                                                                                                                                                                                                                                                            (MAY-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                 616 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                  Glycoprotein;
A; 66017 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=9851916;
                                                                                                                                                                                                                                                                                                            elegans
to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62.3%;
54.5%;
  62.3%;
54.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenorhabditis
                                                                                                                                                                                                                                                                                                             cosmid F55G1.";
EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 38;
Pred. No.
  Score
Pred.
                                                  Hydroxylation; Hypothetical protein.
06B8D494F055C6ED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
  No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            616 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
38;
     , 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 324;
                                                                                                                                                                                                                                                                                                                                                                                                             platform for
                                                                                                                                                                                                                                                                                                                                                                                                Consortium.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

Matches 6: Conservative 1; Mismatches 4: Indels 0; Gaps 0; Gy 1 CISVPLTSVPC 11

Db 362 CVGNPCTSPPC 372

Search completed: June 17, 2002, 16:23:37

Job Time: 1611 sec

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Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                Result
                                                                                                                                                                                                                                                 ĕ
                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A_Geneseq_032802:*
1: /SIDS1/gcgdata/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           June 17, 2002, 16:02:12; Search time 227.35 Seconds (without alignments) 5.374 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-761-636A-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Listing first 45 summaries
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  100.0
96.7
93.4
88.5
85.2
74.6
70.5
70.5
70.5
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                                                                                                                                                                                                                                                                                                                                                                                                                           O: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1990.DAT:*
S: IDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1990.DAT:*
S: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1991.DAT:*
S: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1991.DAT:*
S: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1991.DAT:*
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S: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1099.DAT:*
S: /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA2000.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1980.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1981.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1983.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1983.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1983.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1985.DAT:*
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10
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109
109
178
    22
22
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22
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21
21
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                                       AAU04542
AAU04543
AAU04543
AAU04544
AAU04544
AAU04532
AAU04532
AAU04533
AAU04533
    AAY08287
AAW53243
                                                                                                                                                                                                                                                                                                                SUMMARIES
                                         VEGF based monocyc
Human VEGF-D amino
Human VEGF-D amino
Human truncated VE
                                                                                                                                                                                                                                                     Description
      Mus musculus
                            Human growth
        vascu
                            facto
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Pig tissue innibit	AAR65004		207		38	
numan	ABG11976		193		38	
Potype	AA010752		117	62.3	38	
С	90		67		38	
Human procein sed	AAM79000		2263	63.9	39	
bone mar	AAM00916		1637		39	
OKEX	AAB40294		1062		39	
onibacterium	AAU40825		440		39	
Human polypeptice	AA006993		54		39	
Human PRO polypept	AAU29311		.80		40	
Human signal pepti	AAY87243		80		40	
Id D	AAG04076		121		41	
numan sec	AAU33238		60		41	
pased monocy	AAU04533		9		41	
n secr	AAY07909	20	39		42	
C-FOS INC	AAW14994	18	620		43	
Vascut	AAW44295	19	358		43	
usculus ve	AAW53242	19	358		43	
	AAW14992	18	358		43	
VEGE-D.	AAB37606	22	354		43	
A TO ASSA	AAY97573	22	354		43	
Vascular	AAB70685	22	354		43	
eptide for	AAU08441	22	354		43	
lar e	AAY70983	21	354		43	
	AAY70750	21	354		43	
Human VEGE-D proce	AAB29049	21	354		43	
н	AAB10649	21	354		43	
- 5	AAW44293	19	354		43	
Homo sapiens vascu	AAW53241	19	354		43	
	w	19	354	0	43	
	AAY08286	20	337		43	
_	AAW44296	19	326	0	<b>4</b> ω	
_	757	22	325	70.5	43	
	AAW53240	19	325	70.5	43	

## ALIGNMENTS

```
AAU04526
                                                                                                                                                                                                           Human; VEGF; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                          AAU04526;
                                                                                                                                                                                                                                                                                                                               AAU04526 standard; Peptide; 11 AA
                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                               VEGF based monocyclic peptide 3.
                                                                                                                                                                                                                                                                                      26-SEP-2001
                                                                                                                                                           Disulfide-bond
          Achen MG, Hughes RA,
                                                  18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                 18-JAN-2001; 2001WO-US01533
                                                                                                      26-JUL-2001.
                                                                                                                             WO200152875-A1.
                               (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                          Location/Qualifiers
1..11
                                                                                                                                                 /note= "This bond cyclises the peptide"
           Stacker S,
             Cendron A;
```

WPI; 2001-442248/47.

```
AAU04542
ID AAU0
XX
AC AAU0
AC AAU0
DT 26-S
XX
VEGF
XX
VEGF
XW
Huma
KW Huma
KW diab
KW
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                                                                                                                                                                                                                                                                                                                                                                                            Human; VEGF; vascular endothelial growth factor; anglogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
26-JUL-2001
                                                                                  WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                         diabetic retinopathy; chronic inflammation; cyclic.
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                                                                                                                                                                                                Disulfide-bond
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
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diabetic retinopathy; chronic inflammation; cyclic
                               neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                              Human; VEGF; vascular endothelial growth factor; anglogenesis;
                                                                                                                                                                    VEGF based monocyclic peptide 23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cerebrovascular accident, post-angioplasty restenosis, head, heat or coltrauma, substance-induced neovascularisation of the liver, excessive hormone-related anglogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation combination with an anti-inflammatory agent, to treat a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chronic inflammation, especially rheumatoid arthritis, psoriasis and diabetic retinopathy.
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16-MAY-2000; 2000US-0204590.
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Pred. No. 0.0016;
1; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      whose 3-collected scluwcule is impressed to the exposition relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive because in the condition of the liver excessive the condition of the liver excessive because the condition of the liver excessive because the condition of the liver excessive than a condition of the liver excessive the condition of the liver excessive the condition of the liver excessive than the condition of the liver excessive the condition of the liver excessive the condition of the liver excessive than the condition of the liver excessive the condition of the liver excessive than the condition of the liver excessive than the condition of the liver excessive than the liver excessive the condition of the liver excessive than the liver excessive the condition of the liver excessive than the liver excessive than the liver excessive the liver excessive the liver excessive than the liver excessive the li
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16-MAY-2000; 2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         diabetic retinopathy.
AAU04543 standard; Peptide; 11 AA
                                                                                                                                                                                                                                                                                                                                                                                              Sequence
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nes 9; Conserv
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                                                                                                                                                                                                                                                                                         93.4%;
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                                                                                                                                                                                                                                                                                      Score 57; DB 22;
Pred. No. 0.0034;
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The sequence represents a monomeric monocyclic peptide of the invention, cc whose 3-dimensional structure is modelled on the expose loop of human cc whose 3-dimensional structure is modelled on the expose loop of human cc method of producing a monomeric monocyclic peptide by a measuring cc method of producing a monomeric monocyclic peptide by a measuring cc and cyclising the peptide by oxidising the cysteine residues. The cc monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked composyclic peptides) and a cyclic peptide with at least one amino acid composition to cyclisation are used to interfere with angiogenesis. Cc deleted prior to cyclisation are used to interfere with angiogenesis. Cc characterised by angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy.

Cc The condition is diabetic retinopathy, psoriasis, arthropathy.

Cc trauma, substance-induced neovascularisation of the liver, excessive trauma, substance-induced neovascularisation of the liver, excessive crequelae, hypertension induced neovascular sequelae, or chronic liver sequelae, hypertension induced neovascular sequelae, or chronic liver cc infection. The peptides are also used to modulate vascular permeability in a mammal thas a condition characterised by fluid cc used to interfere and bicyclic peptides are used to interfere vascularies and lymphatic cor brain. The peptides are used to indage blood vessels and lymphatic care also used in combination with an anti-inflammatory agent, to treat a cc diabetic retinopathy.
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16-MAY-2000; 2000US-0204590.
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                                              diabetic retinopathy.
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Query Match
Best Local Similarity

88.5%; 72.7%;

Score 54; DB 22; Length 11; Pred. No. 0.011;

Sequence

11 AA;

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Conservative

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hormone related anglogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and
                                                                                                                                                 neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or trauma, substance-induced neovascularisation of the liver, excessive
                                                                                                                                                                                                                                                       beta-beta carbon separation distances on opposite antiparallel strands a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis,
                                                                                                                                                                                                                                                                                                                                                                                                             The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                         VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 25; Page 47; 102pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VEGF based monocyclic peptide 22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU04544 standard; Peptide; 11 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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1..11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "This bond cyclises the peptide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cendron A;
                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                       or cold
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The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human C vEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein an exposition of a provential peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition the condition is diabetic retinopathy, psoriasis, arthropathy, post-recovery
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                               Claim 49; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                    Novel monomeric monocyclic.peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                            Achen MG, Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JAN-2000;
16-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                          (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; VEGF; vascular endothelial growth factor; anglogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VEGF based monocyclic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU04532;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU04532 standard; Peptide; 10 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 are also used in combination with an anti-inflammatory agent, to treat chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
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8; Conserv
                                                                                                                                                                                                                                                                                 the cysteine residues
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2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "This bond cyclises the peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85.2%;
72.7%;
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Pred. No.
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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and diabeter retinocathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU04520 standard; protein; 96 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; VEGF-D; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation.
The sequence represents Human VEGF-D (vascular endothelial growth factor) amino acids val101-PRO186. The sequence is used in a method of producing a monometric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human VEGF-D amino acids Val101-PRO186.
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                                                                                                                                                                                                                                                 Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JAN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-JUL-2001
                                                                                                                                                                                                                              oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                  WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                                                  (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                         Example 1; Page 89; 102pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 cisvpl-svpc 10
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                                                                                                                                                                                                                                                                                                                                                                             Hughes RA,
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2000US-0204590
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 22;
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cc anglogenesis, neovascularisation or lymphanglogenesis. The condition is combattic retinopathy, psoriasis, arthropathy, hemangloma, vascularised cc malignant or benign tumour, post-recover gerebrovascular accident, compost-anglogenesis. The condition of the liver, excessive homone-related anglogenic cc neovascularisation of the liver, excessive homone-related anglogenic cc dysfunction, diabetes induced neovascular sequelae, have induced cc dysfunction, diabetes induced neovascular sequelae, hypertension induced cc used to modulate vascular permeability in a mammal (the mammal has a cc condition characterised by fluid accumulation in peripheral limbs or in cc lungs, peritoneal cavity, pleura, or brain. The peptides are used to interfere with at least one biological activity peptides are used to interfere with at least one biological activity cc induced by VEGF, VEGF-C or -D and are also used in combination with an cc anti-inflammatory agent, to treat a chronic inflammation, especially covered to the combination of the comb
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
The present sequence represents human vascular endothelial growth factor (VEGF)-D. The specification describes a human cell line which stably expresses VEGF-D, or fragments/analogues having VEGF-D biological activity. VEGF-D antagonists, e.g. antisense nucleic acids or triplex DNA, VEGF-D variants or antibodies (especially chimeric antibodies), are useful for the treatment or alleviation of malignant melanomas, tumours or psoriasis. Anglogenesis and lymphanglogenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      wound healing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human vascular endothelial growth factor (VEGF)-D
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-MAY-1998;
24-DEC-1997;
                                                                                                                                                                                                                                                                A human cell line stably expressing vascular endothelial growth factor D, useful for treating melanomas or tumours expressing VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                   Achen MG, Alitalo K, Stacker SA;
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                                                                                                                                                                                                                   Claim 6; Page 72; 79pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                psoriasis; angiogenesis; lymphangiogenesis; skin graft;
saling; lymphedema; scleroderma; anhydrotic ectodermal dysplasia
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
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97AU-0001131.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70.5%; Score 43; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2
6.7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
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AAB11931
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Best Local
This sequence represents a 109 amino acid truncated human VEGF-D (Vascular endothelial growth factor D), lacking both the N- and C-terminal regions. The invention relates to a monoclonal antibody, or fragments thereof, which is specifically reactive with the truncated human VEGF-D, and methods of preparing the antibody. The antibody of the 1Nvention interferes with the binding of VEGF-D to the VEGF receptors VEGFR-2 and VEGFR-3, but does not interfere with the binding of VEGF to these receptors and additionally is not reactive with VEGF-C. The
                                                                                                                                                                 Claim 1; Fig 1; 44pp; English.
                                                                                                                                                                                                         Novel compositions comprising antibodies reactive to vascular endothelial growth factor-D, useful for treating, e.g. angiogenesis,
                                                                                                                                                                                               lymphangiogenesis and neovascularization disorders
                                                                                                                                                                                                                                                                                                               Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Truncated VEGF-D; vascular endothelial growth factor; human; monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3; vascular permeability disorder; endothelial cell proliferative disorder; angiogenic disorder; lymphanglogenic disorder; lymphanglogenic disorder; neovascularisation disorder; endothelial cell differentiation disorder; cancer; dabetic retinopathy; psoriasis; arthropathy; pulmonary oedema;
                                                                                                                                                                                                                                                                                                                                             (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                 21-DEC-1998;
17-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                    21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   detection; diagnosis; imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stimulating amounts of VEGF-D can be administered to enhance the acceptance and/or healing of skin grafts or to stimulate the healing of a surgical or traumatic wound to the skin. Lymphangiogenesis stimulating amounts of VEGF-D can be used to treat lymphedema. Endothelial proliferation stimulating amounts of VEGF-D are used to treat scleroderma. Vascularisation stimulating amounts of VEGF-D can be used to treat anhydrotic ectodermal dysplasia. VEGF-D antibodies are useful for detecting tumours expressing VEGF-D. Fully-processed VEGF-D can be used to stimulate at least one VEGF-D bloactivity chosen from endothelial cell proliferation, migration, survival and differentiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-NOV-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB11931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB11931 standard; protein; 109 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and lymphangiogenesis without inducing vascular permeability.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                76 isvpltsvp 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rocar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 ISVPLTSVP 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                               98US-0113254
99US-0134556
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 43;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lymphatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 20;
7.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vasculature.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 109;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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2 ISVPLTSVP 10

153 isvpltsvp 161

Query Match Best Local Matches

Similarity 9; Conserv

100.0%; 70.5%;

Score 43; Pred. No.

DB 13;

20;

Length 178; Indels

Conservative

0

Mismatches

0

0

Gaps

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Вb
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              This invention describes the novel preparation of biologically active dimers of recombinant human growth factors of the cysteine knot family starting from cellular inclusion bodies. Such dimers are are useful in pharmaceutical compositions and the method provides yields of 31-39.7%, in examples, compared with about 10% for the conventional method (see Biochemistry, 28 (1989) 2956). AAY08278-Y08301 are human growth factor protein fragments used in the method of the invention.
 Sequence
                                                                                                                                      Claim 14; Page 9; 14pp; German.
                                                                                                                                                                        Preparing active growth factor dimers from inclusion bodies in high
                                                                                                                                                                                                              WPI; 1999-278785/24
                                                                                                                                                                                                                                                                                              05-NOV-1997;
                                                                                                                                                                       yield
                                                                                                                                                                                                                                         Erdmann H,
                                                                                                                                                                                                                                                               (GBFB ) GES BIOTECHNOLOGISCHE FORSCHUNG MBH
                                                                                                                                                                                                                                                                                                                           05-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                 DE19748734-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antibody may be used to treat disorders associated with vascular permeability, endothelial cell proliferation, anglogenesis, lymphanglogenesis, neovascularisation and endothelial cell differentiation, especially cancer, diabetic retinopathy, psoriasis, and arthropathies. The antibody may also be used to treat fluid accumulation in the heart and/or lung via modulation of vascular permeability. It may additionally be used to detect VEGF-D and may be used to image lymphatic
                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                        pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human growth factor protein fragment FIGF178 (VEGF-D178).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY08287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY08287 standard; Protein; 178 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
178 AA;
                                                                                                                                                                                                                                         Kaerst U,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                             97DE-1048734.
                                                                                                                                                                                                                                                                                                                        97DE-1048734.
                                                                                                                                                                                                                                                                                                                                                                                                                                           human; dimer; cysteine knot; cellular inclusion body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70.5%;
                                                                                                                                                                                                                                      Mueller C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 43; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                    Rinas U,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.
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                                                                                                                                                                                                                                   Weich H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 109;
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ARESULT 11
AAW53243
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PR 11-NOV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-NOV-1996;
05-FEB-1997;
10-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-AUG-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW53243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW53243 standard; Protein; 321 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vascular endothelial growth factor; VEGF-D; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus vascular endothelial growth factor D2 (VEGF-D2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUL-1997;
23-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9807832-A1
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                                                                                     in the lung and/or gaseous exchange between the lungs and the blood stream or to improve blood circulation to the heart and 02 gas permeability in cases of cardiac insufficiency, to improve blood flow and gaseous exchange in chronic obstructive airway disease, or to treat malabsorptive syndromes in the intestinal tract. Quantitation of VEGF-D in cancer biopsy specimens may be useful as an indicator of future metastatic risk. Antagonists can be used for treating e.g. conditions such as congestive heart failure, involving accumulations of fluid in the lung resulting from increases in vascular permeability. The products can also be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                           p2 (VEGF-D2). VEGF-D2 can be used for e.g. acceleration of anglogenes in wound healing, tissue or organ translantation, or to establish collateral circulation in tissue infarction or arterial stenosis, such as coronary artery disease, and inhibition of anglogenesis in the treatment of cancer or of diabetic retinopathy. It can also be used in the treatment of lung disorders to improve blood circulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New isolated vascular endothelial growth factor-D - used to develop products for use in e.g. modifying angiogenesis or treating lung, heart or intestinal disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The sequence is that of mouse lung vascular endothelial growth factor p2 (VEGF-D2). VEGF-D2 can be used for e.g. acceleration of angiogenesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 16; Pages 64-65; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAV20809
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-179057/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alitalo K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-0031097.
97AU-0004954.
97US-0038814.
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96AU-0003554.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97us-0051426.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wilks AF;
                                                                                                                                                                                                                                                                                                                                                                                                          the blood
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Sequence

such as coronary artery disease,

and

inhibition

of angiogenesis in

The sequence is that of human breast vascular endothelial growth factor D (VEGF-D). VEGF-D can be used for e.g. acceleration of anglogenesis in wound healing, tissue or organ transplantation, or to establish collateral circulation in tissue infarction or arterial stenosis,

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В
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AAW53240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                    01-JUL-1997;
23-AUG-1996;
23-AUG-1996;
11-NOV-1996;
14-NOV-1996;
05-FEB-1997;
10-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modification; acceleration; wound healing; tissue; organ; transplants; collateral circulation; infarction; arterial stenosis; coronary artery disease; inhibition; cancer; treatment; diabetic retinopathy; lung disorders; blood circulation; gaseous exchange; chronic obstructive airway disease; intestinal malabsorptive syndrome; blopsy; metastatic risk; detection; diagnosis; congestive heart failure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW53240 standard; Protein; 325 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vascular endothelial growth factor; VEGF-D; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens vascular endothelial growth factor D (VEGF-D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW53240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Region
                                                                                                                                                                                                                                                                                                                              21-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                    26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                          WO9807832-A1
                                                                                                                                                                                                                                                                                                                                                                                                           Region
                                                                                                                                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        168 isvpltsvp 176
                                                                   Claim 16;
                                                                                      New isolated vascular endothelial growth factor-D - used to develop products for use in e.g. modifying angiogenesis or treating lung, heart or intestinal disorders
                                                                                                                                     N-PSDB; AAV20806
                                                                                                                                               WPI; 1998-179057/16.
                                                                                                                                                                     Achen MG,
                                                                                                                                                                                          (UYHE-) UNIV HELSINKI
                                                                                                                                                                                                      (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 ISVPLTSVP 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                  Pages 57-58; 101pp; English.
                                                                                                                                                                     Alitalo K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                         96US-0031097.
97AU-0004954.
97US-0038814.
97AU-0007435.
                                                                                                                                                                                                                                                                                                                                 97WO-US14696
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96AU-0003554.
                                                                                                                                                                                                                                                                                              97US-0051426
96AU-0001825
                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "|
156..158
                                                                                                                                                                                                                                                                                                                                                                                                 /note=
                                                                                                                                                                                                                                                                                                                                                                                                             258..260
                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "potential N-linked glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
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                                                                                                                                                                                           LICENSING
                                                                                                                                                                                                                                                                                                                                                                                                                                            "potential N-linked glycosylation site"
                                                                                                                                                                      Stacker SA, Wilks AF;
                                                                                                                                                                                                                                                                                                                                                                                                 "potential N-linked glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 43;
Pred. No.
                                                                                                                                                                                             LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 19;
24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
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Best Local :
                           This sequence is vascular endothelial growth factor-D (VEGF-D), which is an angiogenic protein of the invention. The angiogenic proteins and the DNA sequences encoding them, are used to prevent, treat or ameriorate disease and to detect diseases, or susceptibility, by detecting mutations or the presence amount of angiogenic protein
                                                                                                                                                     New nucleic acid encoding angiogenic proteins, useful e.g. for promoting healing of wounds and treating peripheral arterial critical limb ischaemia or coronary disease -
                                                                                                                                   Claim 11;
         growth of damaged bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; anglogenic protein; wound healing; vascular tissue repair; peripheral arterial disease; critical limb ischaemia; coronary disease; anglogenesis; tumour; inflammation; diabetic retinopathy; psoriasis; rheumatoid arthritis; autoimmune disease; allergy; cancer; therapy; infectious disease; neurodegeneration;
                                                                                                                                                                                                                                                                       Rosen CA, Ruben SM,
                                                                                                                                                                                                                                                                                                  (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                            01-JUN-2000; 2000WO-US14925.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the treatment of cancer or of diabetic retinopathy. It can also be used in the treatment of lung disorders to improve blood circulation in the lung and/or gaseous exchange between the lungs and the blood permeability in cases of cardiac insufficiency, to improve blood flow and gaseous exchange in chronic obstructive airway disease, Quantitation of VEGF-D in cancer biopsy specimens may be useful as an indicator of future metastatic risk. Antagonists can be used involving accumulations of fluid in the lung resulting from increases in vascular permeability. The products can also be used
                                                                                                                                                                                                                                                                                                                                                                                                                            WO200075163-A1
                                                                                                                                                                                                                                                                                                                                                                                              14-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                       HOMO sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vascular endothelial growth factor-D; VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human VEGF-D protein sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY97572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY97572 standard; Protein; 325 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          139 isvpltsvp 147
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les 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 ISVPLTSVP 10
                                                                                                                                                                                                                                        2001-071057/08.
                                                                                                                                                                                                                           AAA91006.
                                                                                                                           Page 226-227; 244pp; English.
Particularly they are used to stimulate wound healing, amaged bone and tissue, and for repair of vascular tissue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  325 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                               99US-0137796.
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100.0%; Pr
                                                                                                                                                                                                                                                                     Hu J, Cao
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Pred. No.
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                                                                                                                                                                                        for
                                                                                                                                                                   disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
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Best Local
                                                                                                                                                    VEGF-D protein encoded by DNA - useful for, e.g. gene therapy and
                                                                                                                                                                                           N-PSDB; AAV15178
                                                                                                                                                                                                      WPI; 1998-110591/10.
                                                                                                                                                                                                                                Hirata Y, Nezu J;
                                                                                                                                                                                                                                                                                       15-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (lymph)angiogenesis. The proteins are also used to identify specific binding agents (potential therapeutic agents) and to raise antibodies. The antibodies are useful as therapeutic agents) and to raise antibodies. Purification and targeting of proteins for in vivo or in vitro diagnosis (including imaging) or for therapy (including when linked to e.g. a label or cytotoxin); and for immunotyping of cells, e.g. for detecting minimal contemplated that the sequences might be useful for treating a very wide infectious diseases (viral, bacterial, if ungal or parasitic); neurodegeneration, also as chemotactic agents or for stimulating regeneration of the nervous system etc.
                                                                                                                                                                                                                                                       (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC
                                                                                                                                                                                                                                                                                                                                                                     W09802543-A1
                                                                                                                                                                                                                                                                                                                                                                                                                              Rate; vascular endothelial growth factor D; VEGF-D; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rat vascular endothelial growth factor D
                                                                                                                                                                                                                                                                                                                15-JUL-1997;
                                                                                                                                                                                                                                                                                                                                           22-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                          inflammation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW44296 standard; Protein; 326 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          increased vascular permeability), diabetic retinopathy, rheumato arthritis or psoriasis. Agonists are also useful for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  especially peripheral arterial disease, critical limb ischaemia or coronary disease. Antagonists of the sequences are used to inhibit angiogenesis in tumours and to treat inflammation (where associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139 isvpltsvp 147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 ISVPLTSVP 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                 Page 35-38; 52pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       325 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                                                                                97WO-JP02456.
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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24;
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(VEGF-D). The VEGF-D protein, compounds and antibodies, which can bind the protein, may be useful in, e.g. gene therapy and in treatment of inflammation and oedema. Vectors, containing the VEGF-D DNA, and VEGF-D DNA sequences may be used for screening for the compounds which bind to

The present sequence represents rat vascular endothelial growth factor D (VEGF-D). The VEGF-D protein, compounds and antibodies, which can hind

Example 8;

DNA sequences may be used for screening the VEGF-D protein.

Sequence

326 AA;

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RESULT 15
AAY08286
ID AAY082
XX AAY082
XX Homon S
CO Homon S
XX Ho
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Best Local Similarity
Thes 9; Conserv
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Best Local S
Matches 9
Search completed: June 17, 2002, 16:02:12 Job time: 421 sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human growth factor protein fragment FIGF (VEGF-D).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY08286;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth factor; human; dimer; cysteine knot; cellular inclusion body;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention describes the novel preparation of biologically active dimers of recombinant human growth factors of the cysteine knot family starting from cellular inclusion bodiles. Such dimers are are useful in pharmaceutical compositions and the method provides yields of 31-39.7%, in examples, compared with about 10% for the conventional method (see Biochemistry, 28 (1989) 2956). AAY08278-Y08301 are human growth factor protein fragments used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-MAY-1999.
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||||||||
173 isvpltsvp 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Preparing active growth factor dimers from inclusion bodies in high
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-278785/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DE19748734-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 14; Page 9; 14pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Erdmann H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GBFB ) GES BIOTECHNOLOGISCHE FORSCHUNG MBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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Local Similarity 100.0%; Pred. No. 24;
hes 9; Conservative 0; Mismatches 0; Indels
                                                                                                                                                            152 isvpltsvp 160
                                                                                                                                                                                   2 ISVPLTSVP 10
                                                                                                                                                                                                                                                                                                                                                                                                                                               337 AA;
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                                                                                                                                                                                                                                                                                   Conservative
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Maximum DB seq length: 2000000000
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
   protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Issued_Patents_AA:*
1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/Dackfiles1.pep:*
6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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61
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   Listing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
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first 45 summaries
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US-08-915-795-9
US-08-915-795-3
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US-08-915-795-8
US-08-925-004-5
US-08-927-597-32
US-08-927-597-32
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US-08-927-357-517
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US-08-927-357-517
US-08-927-357-517
US-08-176-500-111
US-08-189-331-111
US-08-172-719-58
US-08-722-719-58
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 Sequence 9, Appli
Sequence 3, Appli
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Sequence 94, Appli
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Sequence 17, Appli
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RESULT 1 US-08-915-795 Sequence 9, Patent No. (6 GENERAL INI APPLICANY COMPUTE COMPUT OPERAT CLASSI ATTORNEY NAME: REGIST REFERE REGIST REFERE REGIST REFERE REGIST REFERE LENCTH TELEY INFORMATIC STRANMI TISSU US-08-915-799		20 20 20 20 20 20 20 20 20 20 20 20 20 2
9, Application US 9, Application US 9, Application US 1, 6235713 INFORMATION: ANDERS ANDERS ANT: MAIC G. ACH ANT: MAIC G. ACH ANT: Steven A. S. ANT: Steven A. S. ANT: Kari ALITAL OF INVENTION: GR R OF SEQUENCES: ILTRAL OF INVENTION: GR R OF SEQUENCES: Evenson, EET: 1200 G Stree ET: 1200 G Stree ET: 1200 G Stree TY: Washington DC UTWATE: Evenson, 120005 THE READABLE FORM: 120005 THE READABLE FORM: 120005 THE READABLE FORM: 120005 THE READABLE FORM: 120005 THE FLOOPY INTELLIFICATION NUMBER: 11CTATION NUMBER: 11STRATION NUM		34 55.7 77 3 U 34 55.7 77 3 U 34 55.7 77 4 U 34 55.7 78 3 U 34 55.7 83 3 U 34 55.7 83 3 U 34 55.7 100 3 U 34 55.7 100 3 U 34 55.7 120 4 U 34 55.7 120 4 U 34 55.7 121 1 U
/08915795  EN ILKS TACKERR OWTH FACTOR 1  tt, NW, Suite 700  es of America  disk ppatible ppatible ppatible ppatible 2-DOS/MS-DOS telease #1.0, Version #1.25  A: US/08/915,795  US/08/915,795  US/08/915,795  OS: 9: 26,269 26,269 3-8800 8844 0S: 9: Cids  Lung  Lung	ALIGNMENTS	US-08-722-719-61 US-08-722-719-61 US-09-044-796A-12 US-08-722-719-62 US-08-722-719-63 US-08-722-719-18 US-08-722-719-30 US-08-722-719-32 US-08-722-719-32 US-08-722-719-4 US-08-722-719-54 US-08-722-719-78 US-08-722-719-79 US-08-722-719-78 US-
r.		Sequence 22, Appl Sequence 61, Appl Sequence 62, Appl Sequence 60, Appl Sequence 18, Appl Sequence 30, Appl Sequence 31, Appl Sequence 34, Appl Sequence 44, Appl Sequence 54, Appl Sequence 6, Appl Sequence 7, Appl Sequence 7, Appl Sequence 2, Appl Sequence 2, Appl Sequence 2, Appl Sequence 40, Appl

Query Match 70.5%; Score 43; DB 4; Best Local Similarity 100.0%; Pred. No. 10; Matches 9; Conservative 0; Mismatches

0;

0,

Gaps

0;

Length 321; Indels

2 ISVPLTSVP 10

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Query Match
Best Local Similarity
"""" 9; Conserve
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                                                                       Sequence 5, Application US/08915795
Patent No. 6235713
GENERAL INFORMATION:
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TELEX: N/A
INFORMATION FOR SEQ ID NO: 3:
                APPLICANT:
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                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                       HYPOTHETICAL: NO
ORIGINAL SOURCE:
TISSUE TYPE: Human Breast
                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acids
TYPE: amino acid
CTBANDEDUTCE.
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                       139 ISVPLTSVP 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: MARC G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
TOPOLOGY: 11r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   168 ISVPLTSVP 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/915,795 FILING DATE:
                                                                                                                                                                                                                     2 ISVPLTSVP 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 20005
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                            Marc G. ACHEN
Andrew F. WILKS
Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
1200 G Street, NW, Suite 700
                Kari ALITALO
                                                                                                                                                                                                                                                     Conservative
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GROWTH FACTOR
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                                                                                                                                                                                                                                                             70.5%; Score 43; DB 4; Length 325; 100.0%; Pred. No. 10;
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                                                                                                                                                                                                                                              0; Mismatches
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US-08-915-795-8
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; TISSUE TYPE: Human Lung
US-08-915-795-5
                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Application Patent No. 6235713
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                            APPLICANT: MATC G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACK
APPLICANT: Keri ALITALO
TITLE OF INVENTION: GROWTH
NUMBER OF SEQUENCES: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 354 amino acids
       COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/915,795

APPLICATION NUMBER: US/08/915,795
                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, Nw, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: PI
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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CORRESPONDENCE ADDRESS:
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CITY: Washington
FILING DATE:
                                                                                                                                                                               STATE:
                                                                                                                                                           COUNTRY:
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mes 9; Conserv
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Steven A. STACKER
                                                                                                                                                           United States of America
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0;

CLASSIFICATION:

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; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; TISSUE TYPE: Mouse Lung
US-08-915-795-8
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US-08-959-004-5
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/08959004 Patent No. 6197543
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: N/A
INFORMATION FOR SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 100
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS
                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Lal, Preeti
APPLICANT: Shah, Purvi
APPLICANT: Shah, Purvi
TITLE OF INVENTION: HUMAN VESICLE MEMBRANE PROTEIN-LIKE
TITLE OF INVENTION: PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                              CLASSIFICATION: 514 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                             SOFTWARE: FEASTSEQ for Windows Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/959,004 FILING DATE: Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173 ISVPLTSVP 181
                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 650-855-0555
                                                                                              FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF
SEQUENCE CHARACTERISTICS:
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CITY: Palo Alto
                                                                                                                                                                                                                                                                                        COMPUTER: IBM CON
OPERATING SYSTEM:
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                                       TELEPHONE: 050-845-4166
                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                     TELEX:
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amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yue, Henry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hillman, Jennifer L.
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                                                                                                                                                                                                                                                                                                          IBM Compatible
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Pred. No.
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                                                                                                     PF-0414 US
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STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: ADRETUTO6
CLONE: 2822412
US-08-959-004-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , OTHER INFORMATION: Description of Artificial Sequence: Clone ps3 US-08-861-774E-94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
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Best Local Similarity
Thes 7; Conservi
                                                                                                                                                                                                                                                                                                             RESULT 7
5220013-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: METHOD FOR ISOLATION OF BIOSYNTHESIS GENES FOR TITLE OF INVENTION: BIOACTIVE MOLECULES FILE REFERENCE: 9993-006 CURRENT APPLICATION NUMBER: US/08/861,774E CURRENT FILING DATE: 1997-05-22 NUMBER OF SEQ ID NOS: 94 SOFTWARE: PATENTIN VET. 2.0 SEQ ID NOS: 94 SOFTWARE: PATENTIN VET. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                      APPLICANT: PONTE, PHYLLIS A.; CORDELL, BARBARA TITLE OF INVENTION: DNA SEQUENCE USEFUL FOR THE DETECTION OF ALZHEIMER'S DISEASE NUMBER OF SEQUENCES: 30
; FILING DATE: 17-NOV-1986; SEQ ID NO:24:
                                                                                                                                                                                                                                                                                           Patent No. 5220013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 94, Application US/08861774E Patent No. 6297007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 388
                                                                                                                                                        APPLICATION NUMBER: US/
FILING DATE: 30-NOV-1989
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          479 CISVPLTFI 487
                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                              APPLICATION NUMBER: 87,002
FILING DATE: 18-AUG-1987
APPLICATION NUMBER: 8,810
FILING DATE: 30-JAN-1987
APPLICATION NUMBER: 948,376
FILING DATE: 31-DEC-1986
APPLICATION NUMBER: 932,193
                                                                                                                                                                                                                                                                                                                                                                                 318 VYVPLTSVP 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
les 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CISVPLTSV 9
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77.8%;
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77.8%;
                                                                                                                                                                                             US/07/444,118

    Mismatches

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Pred. No. 1.4e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6e+02;
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5220013-24

LENGTH: 90

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US-08-927-597-32
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                                                                                                                                                                                                                                                                                          ; MOLECULE TYPE: protein US-08-612-973-32
Sequence 32, Application US/08927597
Patent NO. 6245503
GENERAL INFORMATION:
APPLICANT: MARRIENS, GEERT
APPLICANT: BOSMAN, FONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
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                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                           Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 32,
                                                                                                                                                                                                                                                                                                                                                                                  TELEFONMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
TELEFAX: (703) 816-4100
INFORMATION FOR SEQ ID NO: 32:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: BYRNE, THOMAS E.
REGISTRATION NUMBER: 32,205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: PURIFIED HEPATITIS C VIRUS ENVELOPE TITLE OF INVENTION: PROTEINS FOR DIAGNOSTIC AND THERAPEUTIC USE NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                              Local Similarity hes 5; Conserv
                                                                                                                                                  66 CLTVPASAVP 75
                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/612,973
FILING DATE: 11-MAR-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: VIRGINIA COUNTRY: U.S.A. ZIP: 22201-4714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: NIXON & VANDERHYE I
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
                                                                                                                                                                              1 CISVPLTSVP 10
                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19 CLEPPYTGCPC 29
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                                                                                                                                                                                                                                                                                                                                    amino acid
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                                                                                                                                                                                                                                                                                                                                                   208 amino acids
                                                                                                                                                                                                            Conservative
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DE MARTYNOFF, GUY
BUYSE, MARIE-ANGE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIXON & VANDERHYE P.C.
                                                                                                                                                                                                                           57.4%;
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                                                                                                                                                                                           Score 35; DB 4; Pred. No. 1.2e+02; Indels
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 6;
                                                                                                                                                                                                                                   Length 208;
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US-08-923-856-1
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Best Local Similarity
Watches 5; Conserva
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                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/08923856 Patent No. 5928894
                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Lal, preeti
APPLICANT: Tal, preeti
APPLICANT: Talg, Tom
APPLICANT: Corley, Neil C.
APPLICANT: Shah, purvi
TITLE OF INVENTION: HUMAN ACTVA-ORF4-LIKE PROTEIN
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
208 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: BYRNE, THOMAS E.
REGISTRATION NUMBER: 32,20
REFERENCE/DOCKET NUMBER: 1
                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Dr.
CURRENT APPLICATION DATA:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/612,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: DE MARTYNOFF, GUY
APPLICANT: BUYSE, MARIE-ANGE
TITLE OF INVENTION: PURIFIED HEPATITIS C VIRUS ENVELOPE
TITLE OF INVENTION: PROTEINS FOR DIAGNOSTIC AND THERAPEUTIC USE
NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS:
                                                                                                                                         STREET: 3174 POI
CITY: Palo Alto
STATE: CA
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                                                                                                         COUNTRY: UZIP: 94304
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66 CLTVPASAVP 75
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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703) 816-4100
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50.0%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1487-10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 208;
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APPLICATION NUMBER: US/08/9 FILING DATE: Filed Herewith PRIOR APPLICATION DATA:

US/08/923,856

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US-08-923-856-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09216294 Patent No. 6080723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IMMEDIATE SOURCE:
LIBRARY: PANCN
CLONE: 223909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                              TELEFAX: 650-845-4166 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: TAGETS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Lal, Preeti
APPLICANT: Tang, Tom
                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/216,294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Corley, Neil C. APPLICANT: Shah, Purvi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143 IGVPMTSVRLPC 154
                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650.855-0555
                                                                                                                                                                                           PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 57.4%;
Local Similarity 66.7%;
nes 8; Conservative
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                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
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                                                                                                                                                                                                                                                                        COMPUTER: IBM CONTROL OPERATING SYSTEM: FastSE
                                                                                                                                                                                                                                                                                                                                                                                      CITY: Palo Alto
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 ISVPLTSV--PC 11
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                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                            FILING DATE:
                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                          94304
: 299 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                      E: Incyte Pharmaceuticals, Inc 3174 Porter Dr.
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    Mismatches

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                                                                                                                    PF-0380 US
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; STRANDEDNESS: single
; TOPOLOGY: Linear
; IMMEDIATE SOURCE:
; LIBRARY: PANCNOTO1
; CLONE: 223909
US-09-216-294-1
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                                                                                                                ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-484-105-20
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           Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 20,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                            TELEPHONE: (415) 494-8700
TELEFAX: (415) 494-8771
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 20
SEQUENCE CHARACTERISTICS:
LENGTH: 363 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                     Query Match
Best Local Similarity 62.5%;
                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: ORIGIN OF REPLICATION COMPLEX GENES NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Osman Ph.D., Richard Aron
REGISTRATION NUMBER: 36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: A-59032/DJB/RAO TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco
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                                                                                                                                                                    TYPE:
                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
             1 CISVPLTS 8
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KOBAYASHI, Ryuji
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                                             Conservative
                                                                                                                                                                                                                                                          (415) 494-8700
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66.78;
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Pred. No. 1.8e+02;
                                             Score 35; DB 1;
Pred. No. 2.2e+02;
3; Mismatches 0
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                                                                              DB 1; Length 363;
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344 CLNIPLTS 351

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ATIUNIEI/AMENI INFORMATION.

KAME: OSMan Ph.D., Richard Aron REGISTRATION NUMBER: 36,627

REFERENCE/DOCKET NUMBER: A-59032/D

TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 494-8700

TELEFAX: (415) 494-8771

TELEFAX: (415) 494-8771

INFORMATION FOR SEQ ID NO: 20: SEQUENCE CHARACTERISTICS: LENGTH: 363 amino acids TYPE: amino acids TYPE: amino acids TOPOLOGY: linear MOLECULE TYPE: protein

US-08-484-106-20
                                                                                                                                                                                                        US-09-227-357-517

Sequence 517, Application US/09227357

Patent No. 6342581

GENERAL INFORMATION:
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                     APPLICANT: Fischer et al.
TITLE OF INVENTION: 123 Human Secreted Proteins
FILE REFERENCE: PZ010P1
CURRENT APPLICATION NUMBER: US/09/227,357
CURRENT FILING DATE: 1999-01-08
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EARLIER APPLICATION NUMBER: PCT/US98/13684
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ZIP: 94111-410,
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC COMPUTER:
COMPUTER: IBM PC COMPUTER:
COMPUTER: PC-DOS/MS-DOS
PC-DOS/MS-DOS/MS-DOS
PC-DOS/MS-DOS
PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 344 CLNIPLTS 351
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ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.30
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TITLE OF INVENTION: ORIGIN OF REPLICATION COMPLEX GENES
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity hes 5; Conserv
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BELL, Stephen p
KOBAYASHI, Ryuji
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HERSKOWITZ, Ira
LI, Joachim J
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FOSS, Margit
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62.58;
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Pred. No. 2.2e+02;
3; Mismatches 0
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EARLIER APPLICATION NUMBER: 60/058,660
EARLIER FILING DATE: 1997-09-12
EARLIER APPLICATION NUMBER: 60/058,661
EARLIER FILING DATE: 1997-09-12
NUMBER OF SEQ ID NOS: 672
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 517
LENGTH: 22
; ORGANISM: Homo sapiens US-09-227-357-517
                                      LENGTH: 22
TYPE: PRT
                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: 60/
EARLIER FILING DATE: 1997-09-12
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EARLIER FILING DATE: 1997-08-18
SABLIER APPLICATION NUMBER:
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EARLIER APPLICATION NUMBER:
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EARLIER FILING DATE: 1997-08-18
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FILING DATE: 1997-08-18
APPLICATION NUMBER: 60/055,950
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FILING DATE: 1997-07-08
APPLICATION NUMBER: 60/055,722
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FILING DATE: 1997-07-08
APPLICATION NUMBER: 60/052,795
FILING DATE: 1997-07-08
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APPLICATION NUMBER: 60/055,723
FILING DATE: 1997-08-18
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FILING DATE: 1997-07-08
APPLICATION NUMBER: 60/051,932
FILING DATE: 1997-07-08
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FILING DATE: 1997-07-08
APPLICATION NUMBER: 60/052,793
FILING DATE: 1997-07-08
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FILING DATE: 1997-07-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/051,925 FILING DATE: 1997-07-08
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RESULT 15
US-08-176-500-111
; Sequence 111, Application US/08176500
; Patent No. 5498538
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein us-08-176-500-111
                                                                                                   밁
Search completed: June 17, 2002, 15:56:36
Job time: 85 sec
                                                                                                                                                                                                                                                                                                           ATTORNEY/ACENT INFORMATION:
ATTORNEY/ACENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 790-9090
TELEFAX: 212 869-8864/9741
TELEFAX: 212 869-8864/9741
TELEFAX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 111:
SEQUENCE CHARACTERISTICS:
LENGTH: 38 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 1155 Avenue of the Americas

STREET: New York

STATE: New York

STATE: New York

COUNTRY: U.S.A.

ZIP: 10036-2711

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION NUMBER: US/08/176,500

FILING DATE:
CLASSIFICATION NUMBER: US/08/013,416

APPLICATION NUMBER: US/08/013,416
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                                                                                                                                                   Query Match
Best Local Similarity 55.v
Stockes 5; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Kay, B. K.
APPLICANT: Fowlkes, D. M.
TITLE OF INVENTION: Totally Synthetic Affinity Reagents
NUMBER OF SEQUENCES: 141
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55.7%;
Local Similarity 60.0%;
hes 6; Conservation
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                                                                                                 3 LTLPLTSIP 11
                                                                                                                                         2 ISVPLTSVP 10
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1155 Avenue of the Americas
                                                                                                                                                                                                   55.7%;

    Mismatches

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1101-143
                                                                                                                                                                                                   Score 34; DB 1; Length 38; Pred. No. 29;
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OM protein - protein search, using sw model
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
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Perfect score:
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No.
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
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Match
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17.117 Million cell updates/sec
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Gapop 10.0 , Gapext 0.5
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A45558
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A39035
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T25169
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QQBEB5
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epidermal growth
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protein T27B7.2
probable kexin ()
probable electrol
UL77 protein - ho
factor H - bovin
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protein kinase C
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nypothetical proce	T15720	N	1057	40.0	40	45
Fi capsure anchori	T14703	2	833	40.0	40	44
outer membrane pro	S20387	_	833	40.0	40	43
DNA-DIHOTOG PIOCET	T33741	2	649	40.0	40	42
probable process x	F84589	N	596	40.0	40	41
Suppressor of Hair	A42770	2	594	40.0	40	40
JK-recompination s	A47214	N	575	40.0	40	39
J-Kappa recombinat	A41585	N	550	40.0	40	38
J-Kappa recombinat	A43567	2	526	40.0	40	37
GLU-TRNAGIN amidoc	G81325		472	40.0	40	36
ada regutatory pro	G82390		452	40.0	40	35
nypotnetical proce	G96556		399	40.0	40	34
nypochecical proce	T17722	N	383	40.0	40	33
metny takea bunk - pr	AG0789		353	40.0	40	32
adaptive response	XYEBOT		352	40.0	40	32
hypothetical prote	н70717	ນ	224	40.0	40	30

## ALIGNMENTS

	RESULT 1  S69207  Vascular endothelial growth factor C precursor - human  Vascular endothelial growth factor C precursor - human  N;Alternate names: FLT4 ligand DHM  C;Species: Homo sapiens (man)  C;Date: 27-Apr-1996 #sequence_revision 01-Nov-1996 #text_change 08-Oct-1999  C;Accession: S69207; S61795; S71443; S69208; G02659  R;Joukov V.; Pajusola, K.; Kaipainen, A.; Chilov, D.; Lahtinen, I.; Kukk, E.;  EMBO J. 15, 1751, 1996
	A, Title: Corrigendum: A novel vascular endothelial growth factor, VEGF-C, 1s A; Reference number: S69207; MUID:96203094 A, Accession: S69207 A, Status: nucleic acid sequence not shown A; Molecule type: mRNA A; Molecule type: mRNA A; Residues: 1-419 < JOUD
	A;Cross-references: EMBL:X94216; NID:g1177488; PIDN:CAA63907.1; PID:e221096; PID: A;Cross-references: EMBL:X94216; NID:g1177488; PIDN:CAA63907.1; PID:e221096; PID: A;Note: the nucleotide sequence was submitted to the EMBL Data Library, December A;Note: only a part of the translation is shown A;Note: this is a revision to the sequence from reference S61795 A;Joukov, V.; Pajusola, K.; Kaipainen, A.; Chilov, D.; Lahtinen, I.; Kukk, E.; Sa
	EMBO J. 15, 290-298, 1996 A;Title: A novel vascular endothelial growth factor, VEGF-C, is a ligand for A;Reference number: S61795; MUID:96178224
neli ries	A;Accession: Sol/95 A;Status: nucleic acid sequence not shown; not compared with conceptual translati A;Molecule type: mRNA
th f	A; Residue: 70-419 < JOUI> A; Residue: 70-419 < JOUI> A; Note: this sequence has been revised in reference \$69207
rote	A; Accession: S/1443 A; Molecule type: protein A: Molecule type: protein
ane lifo fur	R; Lee, J.; Gray, A.; Yuan, J.; Luoh, S.M.; Avraham, H.; Wood, W.I. submitted to the EMBL Data Library, December 1995
fur	A; Description: Vascular endothelial growth factor related protein (VRP): A 119and A; Reference number: 869208
hom	
rote an 2 [i	A;Cross-references: EMBL:U43142; NID:g1150988; PIDN:AAA85214.1; PID:g1150989; R;Morris, J.C. R;Morris, J.C. submitted to the EMBL Data Library, May 1996 A;Reference number: H01557
ron hum ine	A;Accession: GUZ039 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA A:Residnes: 1-419 <mor></mor>
Lote Lote Lote Lote Lote Lote Lote Lote	C;Genetics: C;Genetics: A;Gene: GDB:VEGFC; VRP A;Gene: GDB:VEGFC; VRP A;Cross-references: GDB:3890883; OMIM:601528 F;1-12/Domain: Signal sequence #status predicted <sig> F;13-102/Domain: propeptide #status predicted <pro></pro></sig>

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A;Cross-references: EMBL:X53399; NID:g39786; PIDN:CAA37475.1; PID:g39787
C; Bron, S; Brouillet, S; Bruschi, C.V.; Caldwell, B; Capuano, V.; Carter, N.M.; Chd
Nature 390, 249-256, 1997
A; Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler
Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Hardinois,
Y, M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueel
Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadale, Y.; Sato, T.; Scanlon,
A; Authors: Schleich, S.; Schroeter, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Seror
T.; Winters, P.; Wipat, A.; Yamamoto, H.; Yamane, K.; Yasumoto, K.; Yata, K.; Uchiyama,
A; Title: The complete genome sequence of the Gram-positive bacterium Bacillus subtilis.
A; Staffee. no.; 14:5982
A; Staffee. no.; 15:5982
A; Staffee. no.; 16:5982
A; Staff
                                                                                                     hypothetical protein T23F1.6 - Caenorhabditis elegans
c;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 21-Jan-2000
C;Accession: T25169
R;Wilkinson, J.
A; Reference number: Z19990
                                           submitted to the EMBL Data Library, October 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C:Superfamily: methylphosphotriester-DNA methyltransferase; methylphosphotriester-DNA methylvords: DNA binding; DNA repair; methyltransferase; transcription regulation c;Keywords: DNA binding; DNA repair; methyltransferase; transcription regulation f;23-207/Domain: methylphosphotriester-DNA methyltransferase homology <MPT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A:Cross-references: GB:Z99104; GB:Z99105; GB:AL009126; NID:92632457; PIDN:CAB11974.1; PIA:Experimental source: strain 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-211 <KUN>
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C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 16-Jun-2000
C;Accession: S11483; F69582
R;Morohoshi, F:, Hayashi, K.; Munakata, N.
Nucleic Acids Res. 18, 5473-5480, 1990
A;Title: Bacillus subtilis ada operon encodes two DNA alkyltransferases.
A;Reference number: S11483; MUID:91016831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-211 <MOR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 KSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 ELGKSTNTFCKPPC 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48.0%;
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71.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 48; DB Pred. No. 4.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 58;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 211;
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                                                         A;Title: Alternative splicing of the Schistosoma mansoni gene encoding a homologue A;Reference number: A45558; MUID:92365727
A;Accession: A45558
                                                                                                                                                         C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999 C;Accession: A45558; S27836 R;Shoemaker, C.B.; Ramachandran, H.; Landa, A.; dos Reis, M.G.; Stein, L.D. Mol. Biochem. Parasitol. 53, 17-32, 1992
             A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                epidermal growth factor receptor homolog precursor - fluke (Schistosoma mansoni)
N;Contains: protein-tyrosine kinase (EC 2.7.1.112)
C;Species: Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
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224 SKEIEKSRKTFCVLPC

2 ASELGKSTNTFCKPPC 17

Local Similarity les 8; Conserv

Conservative

45.0%;

Score 45; DE Pred. No. 21;

DB

Length 371;

Mismatches

6

0;

Gaps

0;

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ansen, N. F.; Hughes, B.; Huizar, L.

Nature 408, 816-820, 2000

A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; K;
C.A.; Li, J.H.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marz
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tal

ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.

A;Title: Sequence and analysis of Chromosome 1 of the plant Arabidopsis.
A;Map position: 1
C;Superfamily: Arabidopsis thaliana hypothetical protein F24M12.210
                                                                              A; Gene:
                                                                                            A;Cross-references: GB:AE005173; NID:g11067306; PIDN:AAG28833.1; GSPDB:GN00141 C;Genetics:
                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-371 <STO>
                                                                                                                                                                                                          A; Status: preliminary
                                                                                                                                                                                                                                 A;Reference number: A86141; MUID:21016719
A;Accession: B96614
                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Deransen, N.F.; Hughes, B.; Huizar, L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hypothetical protein T15M6.10 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 23-Mar-2001 C;Accession: B96614
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:Z81129; PIDN:CAB03405.1; GSPDB:GN00023; CESP:T23F1.6
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A;Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                              T15M6.10
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les 7; Conserv
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41.2%;
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A;Gene: SER C;Superfamily: fluke epidermal growth factor receptor homolog 1; protein kinase homology C;Superfamily: fluke epidermal growth factor receptor homolog 1; protein; phosphoprotein C;Keywords: alternative splicing; ATP; autophosphorylation; glycoprotein; phosphoprotein F;1-19/Domain: signal sequence #status predicted <SIG> F;20-1717/Product: epidermal growth factor receptor homolog 1 #status predicted <MAT> F;1018-1323/Domain: protein kinase homology <KIN> F;1026-1034/Region: protein kinase ATP-binding motif
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A;Cross-references: EMBL:M86396; NID:g160957; PIDN:AAA29866.1; PID:g160958
A;Note: sequence extracted from NCBI backbone (NCBIP:111129)
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Genomic sequence comparison of two unrelated isolates of the human gastric path A;Reference number: A71800; MUID:99120557
A;Accession: D71882
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-100 <ARRV
A;Cross-references: GB:AE001512; GB:AE001439; NID:94155392; PIDN:AAD06402.1; PID:9415539
A;Experimental source: strain J99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith, D.R.; Ives, C.; Gibson, R.; Merberg, D.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; Vovis, G.F.; Nature 397, 176-180, 1999
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C;Accession: D71882
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A; Variety: strain J99
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C;Superfamily: conserved hypothetical protein HI0711
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                                                                                                                                                                                                    R;Ardelt, W.; Mikulski, S.M.; Shogen, K.
J. Biol. Chem. 266, 245-251, 1991
A;Title: Amino acid sequence of an anti-tumor protein from Rana pipiens oocytes and earl
A;Reference number: A39035; MUID:91093131
A;Accession: A39035
                                                                                                                                                                                                                                                                                                                                ribonuclease-related anti-tumor protein - northern leopard frog (fragment) C;Species: Rana pipiens (northern leopard frog) C;Date: 31-Jul-1991 #sequence_revision 31-Jul-1991 #text_change 30-Jun-1993 C;Accession: A39035
                                                                                             A;Molecule type: protein
A;Residues: 1-104 <ARD>
C;Superfamily: pancreatic ribonuclease
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                                                                                                                                                                                A;Status: preliminary
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Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 29-Sep-1999
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58.3%;
     43.0%;
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    Mismatches

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Pred. No. 14;
     Score 43;
Pred. No.
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        DB 2;
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                              Length 104;
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probable membrane protein YLR072w - yeast (Saccharomyces cerevisiae)
N;Alternate names: hypothetical protein L2321
C;Species: Saccharomyces cerevisiae
C;Date: 01-Aug-1995 #sequence_revision 24-May-1996 #text_change 05-Nov-1999
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A; Accession: S64904
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Accession: S64904
R; Pohl, T.M.
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                                                                                                                                                                                 A;Cross references: EMBL;AF023459; NID:g2723361; PIDN:AAB95154.1; PID:g2723362
A;Experimental source: tissue type mantle (shell and pearl nacre); cell type pall
C;Superfamily: antileukoproteinase repeat homology
C;Keywords: extracellular matrix; extracellular protein
F;1382-1426/Domain: antileukoproteinase repeat homology <ALP>
                                                                                                                                                                                                                                                                                                                                                    R;Shen, X.; Belcher, A.M.; Hansma, P.K.; Stucky, G.D.; Morse, D.E.
J, Biol. Chem. 272, 32472-32481, 1997
A;Title: Molecular cloning and characterization of lustrin A, a matrix protein from A;Reference number: Z16496; MOID:98070424
A;Accession: T08852
                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Haliotis rufescens (California red abalone)
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 21-Ju1-2000
C;Accession: T08852
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                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-1428 <SHE>
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ultra-high-sulfur keratin 2 - mouse C;Species: Mus musculus (house mouse) C;Date: 31-Mar-1992 #sequence\_revision 31-Mar-1992 #text\_change 24-Sep-1999

RESULT B38346

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A;Title: Genome sequence of the endocellular bacterial symbiont of aphids Buchnera sp. A;Reference number: A84930; MUID:20445173
A;Accession: A84947
A;Status: preliminary
A;Molecule type: DNA
A;Residues:,#1-319 <STO>
                                                                                                                                                                                                         lytB protein [imported] - Buchnera sp. (strain APS)
C:Species: Buchnera sp.
C:Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 23-Mar-2001
C:Accession: A84947
                                                                                                                                                          R;Shigenobu, S.; Watanabe, H.; Hattori, M.; Sakaki, Y.; Ishikawa, H. Nature 407, 81-86, 2000
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A;Residues: 1-230 <WOOD
A;Cross-references: GB:M37759; NID:g200961; PIDN:AAA40106.1; PID:g200962
C;Superfamily: ultra-high-sulfur keratin
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J. Biol. Chem. 265, 21375-21380, 1990
A;Title: Serine-rich ultra high sulfur protein gene expression in murine hair and
A;Reference number: A38346; MUID:91065960
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7; Conserva
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A;Note: the sequence reported in this paper has been corrected. See A38660
C;Superfamily: ultra-high-sulfur keratin
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A;Note: this is a correction
R;Wood, L.; Mills, M.; Hatzenbuhler, N.; Vogeli, G.
J. Biol. Chem. 265, 21375-21380, 1990
A;Title: Serine-rich ultra high sulfur protein gene expression in murine hair and skin A;Reference number: A38346; MUID:91065960
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R;Wood, L.; Mills, M.; Hatzenbuhler, N.; Vogeli, G.
J. Biol. Chem. 266, 4024, 1991
A;Title: Serine-rich ultra high sulfur protein gene expression in murine hair and skin A;Reference number: A38660; MUID:91154184
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A;Residues: 1-21,'GGCGSGCGGCGSNCGGCGSSCCKPVCC',22-40,'GSS',44-45,'G',47-48,'S',50,'GSS'
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A; Molecule type: DNA
A; Residues: 1-223 <W02>
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Best Local Similarity
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A;Gene: AckA2
C;Superfamily: acetate kinase
                                                                                                                                                                                              D.; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
A; Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitournam, ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Waritle: Comparative genomics of Listeria species.
A; Reference number: AB1077; MUID:21537279; PMID:11679669
A; Accession: AC1574
                                                                      A;Molecule type: DNA
A;Residues: 1-397 <GLA>
A;Cross-references: GB:AL592022; PIDN:CAC96363.1; PID:g16413591; GSPDB:GN00178
A;Experimental source: strain Clip11262
                                                                C; Genetics:
                                                                                                                                                                                         A; Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                          acetate kinase homolog AckA2 [imported] - Listeria innocua (strain Clip11262) C:Species: Listeria innocua (c;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 14-Dec-2001 C:Accession: AC1574
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A; Residues: 1-335 <SAM>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Samac, D.A.; Hironaka, C.M.; Yallaly, P.E.; Shah, D.M. Plant Physiol. 93, 907-914, 1990
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C;Superfamily: penicillin tolerance protein
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A;Experimental source: strain APS
C:Genetics:
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Score 41; Pred. No.

DB 2; 95;

Length 397;

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acetate kinase homolog AckA2 [imported] - Listeria monocytogenes C;Species: Listeria monocytogenes C;Species: Listeria monocytogenes C;Species: AHI220 C;Accession: AHI220 C;Accession: AHI220 R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Blocker, Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.; Fsihi, H. D.; Jones, L.M.; Karst, U. Science 294, 849-852, 2001 A;Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitournam, A.; Malok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland, A;Title: Comparative genomics of Listeria species. A;Reference number: AHI220 A;Accession: AHI220 A;Accession: AHI220 A;Status: preliminary A;Molecule type: DNA A;Residues: 1-397 -GLA> A;Cross-references: GB:NC_003210; PIDN:CAC99246.1; PID:gl6410584; GSPDB:GN00177 A;Experimental source: strain EGD-e C;Genetics: A;Gene: AckA2 C;Superfamily: acetate kinase
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14.680 Million cell updates/sec
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EMBL; Y12863; CAA73370.1; -.
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SMART; SM001449; PDGF 1; 1.
PROSITE; PS00278; PDGF 2; 1.
PROSITE; PS50278; PDGF 2; 1.
PROGEN; Growth factor; Glycoprotein; Signal; Repeat; Multigene family.
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ProDom; PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; P15692; 1VPP
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SIMILARITY: BELONGS TO THE PDGF/Veggr FAMILY OF GROWTH FACTORS.
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TISSUE SPECIFICITY: Highly expr
                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR000072; PDGF.
                                                                                                                             Conservative
  STANDARD;
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153
189
191
136
145
145
185
                                                                                                                                                                                                  40444 MW;
                                                                                                                                           93.8%;
                                                                                                                                                        80.0%;
                                                                                                                                         Pred. No. 6.
                                                                                                                                                                                                        N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
 PRT;
                                                                                                                                                                                                                                                                                                                                                                        4 X 16 AA REPEATS OF C-X(10)-C-X-C-X(1,3)-C.
1 (APPROXIMATE).
                                                                                                                                                                                                                                                                                                                                                                                                                     VASCULAR ENDOTHELIAL GROWTH FACTOR D.
                                                                                                                                                                                                                                                                                                                                                                                                                                        OR 99 (IN A MINOR FORM)
                                                                                                                                                                                             2048D769D735173E CRC64;
                                                                                                                                                                                                                                                                                                                                                                     (APPROXIMATE).
                                                                                                                            Mismatches
326 AA
                                                                                                                                                     DB 1;
                                                                                                                      ль
1;
                                                                                                                                                    Length 354;
                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in skeletal muscle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    heart, small
                                                                                                                       0,
                                                                                                                    Gaps
                                                                                                                    0;
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RA Yamada Y., Hirata Y., Nezu J., Shimane M.;

RI Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.

CC :- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis

CC and endothelial cell growth, stimulating their proliferation and

CC migration and also has effects on the permeability of blood

CC vessels. May function in the formation of the venous and lymphatic

CC of differentiated lymphatic endothelium in adults. Binds and

CC of differentiated lymphatic endothelium in adults. Binds and

CC :- SUBCHLULAR LOCATION: Secreted (By similarity).

CC :- SUBCHLULAR LOCATION: Secreted (By similarity).

CC :- FUM: Undergoes a complex proteolytic maturation which generates a

CC variety of processed secreted forms with increased activity toward

CC VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer

CC VEGF b is composed mostly of two VEGF homology domains (VHDs)

CC Dinked by disulfide bonds before secretion. The fully processed

CC VEGF-D is composed mostly of two VEGF homology domains (VHDs)

CC --- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                     DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute. There are no restrictions on the European Bioinformatics Institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                        CARBOHYD
                                                                           DISULFID
                                                                                         DISULFID
                                                                                                                                                                         REPEAT
                                                                                                                                                           REPEAT
                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                            PROPER
                                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                         Cleavage on pair of basic
                                                                                                                                                                                                                                                                                                                                         Mitogen; Growth
                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00141; PDGF; 1
                                                                                                                                                                                                                                                                                                                                                                                                        ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AF014827; AAB66557.1; HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              035251;
01-MAR-2002 (Rel. 41, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamada Y., Hirata Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FIGF OR VEGFD
                                                                                                                                                                                                                                                                                                                                                                                                    PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                              factor; Glycoprotein; Signal; Repeat;
                                      242
278
298
317
158
194
196
141
150
160
                                                                                                                                                                                                                                                                                        93
     MW;
                                                                                                                                                                                                                                                                                                      residues; Multigene family.
POTENTIAL.
                                                         4 (INCOMPLETE).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAG. . .) (POTENTIAL).
N-LINKED (GLCNAG. . .) (POTENTIAL).
N-LINKED (GLCNAG. . .) (POTENTIAL).
1261AFA373596C00 CRC64;
                                                                                                                                                                                                                     (1)
                                                                                                                                                                                                                                                                 VASCULAR ENDOTHELIAL GROWTH FACTOR D.
                                                                                                                                                                                                                                   4 X 16 AA REPEATS OF C-X(10)-C-X-C
                                                                                                                                                                                                     (APPROXIMATE)
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Query Match

Score 77;

DΒ

Length 326

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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2002 (Rel. 41, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOUSE
                                                                                                                                                                                                                                              Baldwin M.E., Catinel B., Nice E.C., Roufail S., Hall N.E.,

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.G., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Achen M.G., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Achen M.G., Alitalo K., Stacker S.A., Achen M.G.;

Stenvers K.L., Achen M.G., Achen M.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Fibroblast;
MEDLINE=97030254; PubMed=8876195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           growth factor) (FIGF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Orlandini M., Marconcini L., Ferruzzi R., Olivie "Identification of a c-fos-induced gene that is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FIGF OR VEGFD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P97946;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VEGD_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=99288130; PubMed=9622638;
Avantaggiato V., Orlandini M., Acampora D., Oliviero S., Simeone A.;
"Embryonic expression pattern of the murine figf gene, a growth factor
belonging to platelet_derived growth factor/vascular endothelial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-97349118; PubMed-9205122;
Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
"Molecular cloning of a novel vascular endothelial growth factor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                platelet-derived growth factor/vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=21276411; PubMed=11279005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RECEPTOR SPECIFICITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEVELOPMENTAL STAGE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genomics 42:483-488(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASELGKTTNTFFKPPC 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ASELGKSTNTFCKPPC 17
PTM: Undergoes a complex proteolytic maturation which generates variety of processed secreted forms with increased activity toware
                                              lung and kidney mesenchyme, liver, derma, and vertebral column.
INDUCTION: By the transcription factor c-fos.
                                                                                                                           body structures and organs of the embryo such as limb buds, acoustic ganglion, teeth, heart, anterior pituitary as well
                                                                                                                                                                               TISSUE SPECIFICITY: Highly expressed in fetal and adult lung DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in sever
                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73:221-224(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U.S.A. 93:11675-11680(1996).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Ver
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vertebrata; Euteleostomi;
        with increased activity toward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oliviero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       related to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                             periosteum of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Murinae; Mus
                                                                                                                                                                                             in several
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
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QΥ
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RPP RPP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way most in the content is in no way most in the content is in the content in the content in the content is in the content 
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CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000072; PDGF. Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X99572; CAA67892.1; -. EMBL; D89628; BAA14002.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP; P15692;
                                                                                                                                                                                     VEGC_MOUSE STANDARD; PRT; 415 AA.
197953;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
16-JUL-1998 (Rel. 41, Last annotation update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor C precursor (VEGF-C) (Vascular endothelial growth factor related protein) (VRP) (Flt4 ligand) (Fl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mitogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MGD; MGI:108037;
                                                                                                                                                                                                                                                                                                                                                             MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROPEP
                                                                    Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
SEQUENCE FROM N.A
                                           NCBI_TaxID=10090;
                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                      126 ASELGKTTNTFFKPPC 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEGFR-3 and VEGFR-2. VEGF-D first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed VEGF-D is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions (By similarity). SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 ASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS00249; PDGF_1; 1. PS50278; PDGF_2; 1. Growth factor; Glyco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Growth factor; Glycoprotein; Signal; Repeat; on pair of basic residues; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                 (Mouse).
etazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1VPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Figf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
278
298
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.0%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 77;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED (GLCNAC...) (POTENTIAL).
N-LINKED (GLCNAC...) (POTENTIAL).
N-LINKED (GLCNAC...) (POTENTIAL).
6636B17FBF07037C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
                                                                         Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA REPEATS OF C-X(10)-C-X-C-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.2e-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                 (Flt4-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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PROSITE: PS00249; PDGF_1; 1.
PROSITE: PS50278; PDGF_2; 1.
Mitogen; Growth factor; Glycoprotein;
                                      DOMAIN
                                                                                                                                                                        Cleavage
                                                                                                                                                                                                                                                                                  SMART; SM00141; PDGF;
                                                                                                                                                                                                                                                                                                         PRINTS; PR00438; GFCYSKNOT. ProDom; PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF03128; CXCXC; 5 Pfam; PF00341; PDGF; 1.
                                                                PROPEP
                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                      MGD; MGI:109124; Vegfc.
InterPro; IPR004153; CXCXC.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; U73620; AAC52984.1; -. EMBL; U58112; AAB46707.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fitz L.J., Morris J.C., Towler P., Long A., Burgess Wang J., Gassaway R., Nickbarg E., Kovacic S., Ciarl Glannotti J., Finnerty H., Zollner R., Beier D.R., L Turner K.J., Wood C.R., "Characterization of murine Flt4 ligand/VEGF-C."; Oncogene 15:613-618(1997).

1- FUNCTION: Growth factor active in angiogenesis, "I provided the state of the sta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., AND SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       suggests a role in lymphatic vas
Development 122:3829-3837(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "VEGF-C receptor binding and pattern of expression with VEGFR-3 suggests a role in lymphatic vascular development.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kukk E., Lymboussaki A., Taira
Joukov V., Alitalo K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-BALB/C;
MEDLINE-97164697; PubMed-9012504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        lung, liver, skeletal muscle and klaney.

PTH: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity toward verset. The fully processed form could activate VEGFR-2. But only the fully processed form could activate VEGFR-2. The fully processed form could activate VEGFR-2. Before secretion, a cleavage occurs between arg-227 and ser-228 producing an heterotetramer. The next extracellular step of the processing removes the N-terminal propeptide. Finally the mature VEGF-C is composed mostly of two VEGF homology domains (VHDs) bound by non-covalent interactions (By similarity).

SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted.

TISSUE SPECIFICITY: Expression detected in mesenchymal cells of postimplantation embryos, particularly in the regions where the lymphatic vessels undergo sprouting from embryonic veins, such as the perimetanephric, axillary and jugular regions, and in the developing mesenterium. Expressed in adult heart, brain, spleen, lung, liver, skeletal muscle and kidney.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in angiogenesis of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (Flk1) and VEGFR-3 (Flt4) receptors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US8112; AAB46707.1;
P15692; 1VPF
                                                                                                                                                                  on pair of basic
                                32
108
224
276
                                31
107
223
415
358
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                                                                                                                                                            residues; Multigene
4 X 16 AA REPEATS OF C-X(10)-C-X-C-X(1,3)-C.
                                                          POTENTIAL.
VASCULAR ENDOTHELIAL GROWTH FACTOR C.
                                                        POTENTIAL
                                                                                                                                       BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S., Kaipainen A., Jeltsch M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
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S., Ciarletta A.,
                                                                                                                                                         Repeat; family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Leak L.V.,
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VEGC_
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMAN VEGC_HUMAN SIGN...

VEGC_HUMAN SIGN...

P49767;

01-OCT-1996 (Rel. 34, Created)

01-OCT-1996 (Rel. 34, Last sequence update)

01-MAR-2002 (Rel. 41, Last annotation update)

Vascular endothelial growth factor C precursor (VEGF-C) (Vascular redathelial growth factor related protein) (VRP) (Flt4 ligand) (Flt4-
                                           MEDLINE-97388482; pubMed-9247316;
Fitz L.J., Morris J.C., Towler P., Long A., Burgess Wang J., Gassaway R., Nickbarg E., Kovacic S., Clar Giannotti J., Finnerty H., Zollner R., Beier D.R., "Characterization of murine Flt4 ligand/VEGF-C.";
                                                                                                                                      MEDLINE-96312526; PubMed-8700872; Lee J., Gray A., Yuan J., Luoh S.-M., Avraham H., Wood W.I.; "Vascular endothelial growth factor-related protein: a ligand and specific activator of the tyrosine kinase receptor Flt4."; Proc. Natl. Acad. Sci. U.S.A. 93:1988-1992(1996).
MEDLINE=97377029; PubMed=9233800
          SEQUENCE OF 32-41; 112-121 AND 228-233,
                                                                                                                          SEQUENCE FROM N.A.
                                      Oncogene 15:613-618(1997).
                                                                                                                                                                                                                TISSUE-Glial tumor;
                                                                                                                                                                                                                                                  Joukov V., Pajusola K., Kaipainen
Saksela O., Kalkkinen N., Alitalo
EMBO J. 15:1751-1751(1996).
                                                                                                                                                                                                                                                                                                                                    Joukov V., Pajusola K., Kaipainen A., Chilov E
Saksela O., Kalkkinen N., Alitalo K.;
"A novel vascular endothelial growth factor, v
the Flt4 (VEGFR-3) and KDR (VEGFR-2) receptor
                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                         MEDLINE=96203094; PubMed=8612600;
                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A., AND SEQUENCE OF 103-120 MEDLINE-96178224; PubMed-8617204;
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SEQUENCE
                                                                                                                                                                                                                                                                                                          ERRATUM
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                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID-9606;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                                                                                             15:290-298(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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158
162
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INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC...) (POTENTIAL).
N-LINKED (GLCNAC...) (POTENTIAL).
N-LINKED (GLCNAC...) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 59; DB 1;
Pred. No. 0.023;
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                                                                                                                                                                                                                                                                                                                                                   factor, VEGF-C,
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         AND MUTAGENESIS OF ARG-227.
                                                                                 Burgess P., (
S., Ciarletta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 415
                                                                                                                                                                                                                                                                                                                                                                          Lahtinen
                                                                     Leak L.V.,
                                                                                                                                                                                                                                                                                                                                                is a ligand for
                                                                                              Greco
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0;

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EMBL; X94216;
EMBL; U43142;
EMBL; U58111;
HSSP; P15692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Júúkov V., Sorsa T., Kumar V., Jeltsch M., Saksela O., Kalkkinen N., Alitalo K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBO J. 16:3898-3911(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proteolytic processing regulates receptor specificity and activity of
                                                            DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an
               CARBOHYD
CARBOHYD
                                                                                                                                                         REPEAT
                                                                                                                                                                                                                                                                                                                                                                      ProDom; PD001629; PDGF; SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MIM; 601528
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                                                                                                                                                                                                                                                                                                                     Mitogen;
                                                                                                                                                                                                                                                                                                                                         PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF03128; CXCXC; Pfam; PF00341; PDGF; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                              DISULFID
                                                                                                                                            REPEAT
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                                                                                                                                                                                                                                          PROPEP
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                                                 CARBOHYD
MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             runction. Growth factor active in angiogenesis, and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in angiogenesis of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (FIkl) and VEGFR-3 (FIt4) receptors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bonds. Before secretion, a cleavage occurs between arg-227 and ser-228 producing an heterotetramer. The next extracellular step of the processing removes the N-terminal propeptide. Finally the mature VEGF-C is composed mostly of two VEGF homology domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   variety of processed secreted forms with increased activity toward VEGFR-3, but only the fully processed form could activate VEGFR-2. VEGFR-C first form an antiparallel homodimer linked by disulfide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      marrow, heart, placenta, ovary, skeletal muscle colon and small intestine and fetal liver, lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE SPECIFICITY: Spleen, lymph node, thymus, appendix, bone marrow, heart, placenta, ovary, skeletal muscle, prostate, tes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBUNIT: Homodimer; no SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (VHDs) bound by non-covalent interactions.
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
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Undergoes a complex proteolytic maturation which generates a
                                                                                                                                                                                                                                                                                                                                                                                     PR00438; GFCYSKNOT. PD001629; PDGF; 1.
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PS50278; PDGF_2; 1.
Growth factor; Glyco
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IPR002400; GF_Cysknot.
IPR000072; PDGF.
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                                                                                                                                                                                                                                                                                                       factor; Glycoprotein; Signal; Repeat;
of basic residues; Multigene family.
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N-LINKED (GLCNAC. . .) (POTENTIAL).
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N-LINKED (GLCNAC. . .) (POTENTIAL).
R->S: NO PROTEOLYTIC PROCESSING AND L
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16-OCT-2001 (Rel. 40, Last annotation update)
Methylphosphotriester-DNA alkyltransferase.
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Bacillus subtilis chromosome.";
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"Bacillus subtilis ada operon encodes two DNA alkyltransferases.";
Nucleic Acids Res. 18:5473-5480(1990).
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"Molecular analysis of Bacillus subtilis ada mutants deficient in adaptive response to simple alkylating agents.";
J. Bacteriol. 173:7834-7840(1991).
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                                                                                                                                                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                                                                                                                    TWO GENES
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                                                                                                                                                                                                     non-profit
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71.4%;
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Pred. No. 0.034;
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SubtiList; BG10166; adaA.
InterPro; IPR004026; Ada\_Zn\_bind.
InterPro; IPR000005; HTHAraC.

PF02805; Ada\_Zn\_binding; 1

EMBL;

AB006424; BAA33074.1;

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EMBL; Z99104; CAB11957.1; EMBL; Z99105; CAB11974.1; PIR; S11483; XUBSMM. HSSP; P06134; IADN.

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METAL 86 87
ACT_SITE 85 85
MUTAGEN 86 87
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                                                                                             Hypothetical protein SEQUENCE 905 AA;
                                                                                                                                                     entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                              Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
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Nagase T., Kikuno R., Ishikawa K.-I., Hirosawa M., Ohara O.;
"Prediction of the coding sequences of unidentified human genes.
The complete sequences of 150 new cDNA clones from brain which co
for large proteins in vitro.";
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Mammalia; Eutheria; Primates;
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16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation updat
Hypothetical protein KIAA1383.
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SEQUENCE
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SMART; SM00342; HTH_ARAC; 1.
                            Local Similarity
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3 SELGKSTNTFCKPP 16
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les 8; Conserv
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                                                                                                                 AB037804; BAA92621.1; ALT_INIT.
AL451083; CAC36345.1; -.
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72.7%;
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                                    Score 46;
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Pred. No. 0.76;
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BY SIMILARITY.
BY SIMILARITY.
ACCEPTOR FOR METHYL FROM PHOSPHOTRIESTER.
KR-NC: LOSS OF ACTIVITY.
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                     Mismatches
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TEROPS; (40.00);
InterPro; IPRO03653; SUMO_protease.
Hydrolase; Thiol protease; Ubiquitin conjugation.
DOMAIN 666 1112 PROTEASE.
DOMAIN 765 765 BY SIMILARITY.
                                                                                                                                                                                                       EMBL;
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                                                                                                                                                                                                                                                                 EMBL;
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Q9GZR1; Q9UJV5; O94891;
16-CCT-2001 (Rel. 40, Created)
16-CCT-2001 (Rel. 40, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
SUMO-1-specific protease 1 (EC 3.4.22.-) (Sentrin-specific protease SENF6) (Protease FKSG6).

SUSP1 OR SSP1 OR KIAA0797.

HOMO Sapiens (Human).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Identification of FKSG6, a novel protein with protease activity."; Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yeh E.T., Gong L., Kamitani T.;
"Ubiquitin-like proteins: new wines in new bottles.";
Gene 248:1-14(2000).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=20261527; PubMed=10799485;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: BELONGS TO PEPTIDASE FAMILY C48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE SPECIFICITY: Highly expressed in reproductive organs, such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Cytoplasmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         as testis, ovary,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           large proteins in vitro."; Res. 5:277-286(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                   605003;
                                                                                                                                                                                                                                       AF306508;
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                                                                                                                                                                                                    ; AAF04852.1; -.
; AAG29831.1; -.
; AAG30253.1; -.
; BAA34517.1; -.
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CONFLICT
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01-AUG-1991 (Rel. 19, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-FEB-1995 (Rel. 31, Last annotation update)
p-30 protein (EC 3.1.27.-) (Onconase).
Rana pipiens (Northern leopard frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
NCBI_TaxID=8404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RANPI
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                                                                                                                                                                                                                                                                                                                           MOSIMANN S.C., Ardelt W., James M.N.G.;

MOSIMANN S.C., Ardelt W., James M.N.G.;

Refined 1.7 A X-ray crystallographic structure of P-30 protein, an amphibian ribonuclease with anti-tumor activity.";

J. Mol. Biol. 236:1141-1153(1994).

1. HOLL THE BEST THOOR CELL LINES IN VITRO, AS WELL AS ANTITUMOR AGAINST SEVERAL TUMOR CELL LINES IN VITRO, AS WELL AS ANTITUMOR LINE VITYO, IT EXHIBITS A RIBONUCLEASE-LIKE ACTIVITY AGAINST HIGH MOLECULAR WEIGHT RIBOSOMAL RNA.

1. DEVELOPMENTAL STAGE: EARLY EMBRYOS (UP TO FOUR BLASTOMERE STAGE).

1. SIMILARITY: BELONGS TO THE PANCREATIC RIBONUCLEASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a novel antitumor protein of Rana pipiens oocytes and early embryos.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIINE-91093131; PubMed-1985896;
Ardelt W., Mikulski S.M., Shogen K.;
"Amino acid sequence of an anti-tumor protein from Rana pipiens
oocytes and early embryos. Homology to pancreatic ribonucleases.";
J. Biol. Chem. 266:245-251(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mosimann S.C., Johns K.L., Ardelt W., Mikulski S.M., Shogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3D-STRUCTURE MODELING.
MEDLINE=93066156; PubMed=1438177;
                                                                      ACT_SITE
ACT_SITE
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                                                                                                                                                                                                                                                            Pfam; PF00074; rnaseA;
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                                                                                                                                                                  Hydrolase;
                                                                                                                                                                                         PROSITE;
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BY SIMILARITY.
T -> M (IN REF. 1 AND 4).
Q -> E (IN REF. 1 AND 4).
Y -> C (IN REF. 1 AND 4).
                                                                                                                                              PYRROLIDONE CARBOXYLIC ACID.
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16-OCT-2001 (Rel. 40,
01-MAR-2002 (Rel. 41,
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MEDLINE=20445173; PubMed=10993077;
Shigenobu S., Watanabe H., Hattori M., Sakaki Y., Ishikawa H.;
Senome sequence of the endocellular bacterial symbiont of aphids
Buchnera sp. APS.";
Nature 407.81-86(2000).
                                                                                                                                                                                                                                                                                                                                                             symbiotic bacterium).
Bacteria; proteobacteria; gamma subdivision; Buchnera
                                                                                                                                                                                                                                                                                                                                                                                Buchnera aphidicola (subsp. Acyrthosiphon pisum) (Acyrthosiphon pisum
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                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                       Isoprene biosynthesis; Complete proteome.
seQUENCE 319 AA; 35741 MW; 69D8AFCC12DD09B8 CRC64;
                                                                             EMBL; AP001118; BAB12865.1; -.
InterPro; IPR003451; LytB.
Pfam; PF02401; LYTB; 1.
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Local Similarity
nes 8; Conserv
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RT "Structural analysis of Arabidopsis thaliana chromosome 3. II.
RT Sequence features of the 4,251,695 bp regions covered by 90 Pl, TAC
RT and BAC clones.";
CONTATION: THIS PROTEIN FUNCTIONS AS A DEFENSE AGAINST CHITIN
CO CONTATING FUNGAL PATHOGENS.
CO CONTATION: Hydrolysis of the 1,4-beta-linkages of N-
CO CATALYTIC ACTIVITY: Hydrolysis of thin.
CO CONTATION: NACOLAR AND PROTOPLASTS.
CO CONTATION: VACUOLAR AND PROTOPLASTS.
CO CONTATION: ETHYLENE INDUCES HIGH LEVEL IN ROOTS WITH LOWER
CO LEVELS IN LEAVES AND FLOWERING SHOOTS.
CO OF BASIC CHITINASE WITH EXPRESSION INCREASING WITH PLANT AGE.
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CHIT_ARATH
                                                                                                                       InterPro; IPR001002; Chitin_bind.
InterPro; IPR000726; Glyco_hydro_19.
Pfam; PF00187; Chitin_binding; 1.
Pfam; PF00187; Glyco_hydro_19; 1.
Pfam; PF00182; Glyco_hydro_19; 1.
PrINTS; PR00451; CHITINBINDNG
PRODOM; PD000574; Glyco_hydro_19; 1.
PRODOM; PD000609; Chitin_bind; 1.
PRODOM; PD000609; Chitin_bind; 1.
PROSITE; PS00026; CHITIN_BINDING; 1.
PROSITE; PS000774; CHITINASE_19_1; 1.
PROSITE; PS000774; CHITINASE_19_2; 1.
PROSITE; PS000774; CHITINASE_19_2; 1.
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01-FEB-1991 (Rel. 17, Last sequence update)
01-MAR-2002 (Rel. 41, Last sequence in update)
01-MAR-2002 (Rel. 41, Last annotation update)
Basic endochitinase precursor (EC 3.2.1.14),
A73612500 OR T2E22.18 OR T2E22_119 OR MQC3.32 OR MQC3.34.
Arabidopsis thaliana (Mouse-ear cress),
Eukaryote; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHIT_ARATH P19171;
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232 AELGKETGTFTK 243
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               M38240; AAA32769.1; ALT_INIT. AP002047; BAB03157.1; -.
Glycosidase; Chitin degradation; Chitin-binding; Signal.
1 20
21 315 BASIC ENDOCHITINASE.
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Best Local :
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2 P16726;

T 01-AUG-1990 (Rel. 15, Created)

T 01-AUG-1990 (Rel. 15, Last seque)

T 01-DEC-1992 (Rel. 24, Last annot)
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                                                                                                                                                                                                                                                                                                                                    Chee M.S., Bankler A.T., Beck S., Bohni R., Brown C.M., Cerny R., Horsnell T., Hutchison C.A., III, Kouzarides T., Martignetti J.A., Preddie E., Satchwell S.C., Tomlinson P., Weston K.M., Barrell B.G., "Analysis of the protein-coding content of the sequence of human cytomegalovirus strain AD169.";

Curr. Top. Microbiol. Immunol. 154:125-169(1990).

-i- FUNCTION: VIRION PROTEIN (BY SIMILARITY).

-i- SIMILARITY: BELONGS TO FAMILY THAT GROUPS TOGETHER HSV-1 UL25, EHV-1 36, EBV BYRF1, HCMV UL77, ILTV ORF2, AND VZV 34.
                                                                                                                                                                                                   EMBL; X17403
PIR; S09840;
                                                                                                                                    CARBOHYD
                                                                                                                                                             CARBOHYD
                                                                                                                                                                          Pfam; PF01499; UL25;
                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human cytomegalovirus (strain AD169).
Viruses; dsNNA viruses, no RNA stage; Herpesviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Betaherpesvirinae;
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    94
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CELDEGPSPRTLLQPPC 110
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                                                                   Similarity
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                                                                                                                    210
246
263
642 AA;
                                                    Conservative
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71186
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246

    Last sequence update;
    Last annotation updat

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41.2%;
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50.0%;
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N-LINKED
                                                               Score 41; DB 1;
Pred. No. 32;
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Pred. No. 16;
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                                                     Mismatches
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RESULT 13 CFAH\_BOVIN

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01-MAR-2002 (Rel.
01-MAR-2002 (Rel.
Complement factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2002
01-MAR-2002
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Q28085;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Soames C.J., Day A.J., Sim R.B.;

"prediction from sequence comparisons of residues of factor H involved "prediction from sequence comparisons of residues of factor H involved in the interaction with complement component C3b.";

Biochem. J. 315:523-531(1996).

1- FUNCTION: Factor H functions as a cofactor in the inactivation of c3b by factor I and also increases the rate of dissociation of the C3b bbb complex (C3 convertase) and the (C3b)MBB complex (C5 convertase).
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                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   convertase) in the alternative complement pathway (By SIMILARITY: CONTAINS AT LEAST 13 SUSHI (SCR) DOMAINS.
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41, Last annotation update)
H (H factor 1) (Fragments).
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Y SIMILARITY
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P36582;
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SEQUENCE
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01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Protein kinase C-like 1 (EC 2.7.1.-)
PCK1 OR SPAC22H10.01C OR SPAC1768.14C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCHPO
                                                                                                                                                                                                                                                                                                                                                                        Toda T., Shimanuki M., Yanagida M.;
Toda T., Shimanuki M., Yanagida M.;
"Two novel protein kinase C-related genes of fission yeast are
essential for cell viability and implicated in cell shape control.";
EMBO J. 12:1987-1995(1993).
                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schizosaccharomyces pombe (Fission yeast).
Eukaryota; Fungi; Ascomycota; Schizosaccharomycetes;
                                                                                                                                                              EMBL; D14337; BAA03267.1; -.
EMBL; Z69730; CAA93602.1; -.
EMBL; Z69795; CAA93697.1; -.
PIR; S35362; S35362.
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MEDLINE-93259141; PubMed-8491190.
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                                                                                                                                                                                                                                                                                                                                        SUBFAMILY.
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Pred. No.
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34;
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InterPro; IPR000008; C2. InterPro; IPR002219; DAG\_PE-bind. InterPro; IPR000719; EUk\_pkinase. InterPro; IPR000961; Pkinase\_C.

InterPro;

pF02185; HR1; 2.
pF00069; pkinase; 1.
pF00433; pkinase\_C;

pkinase\_C; 1.

PF00130; DAG\_PE-bind;

IPR000861; REM\_repeat
IPR002290; Ser\_thr\_pk;

thr\_pkinase. ld; 2.

HSSP;

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InterPro; IPR002219; DAG_PE-bind.
InterPro; IPR002219; bk_pkinase.
InterPro; IPR000961; pkinase_C.
InterPro; IPR000961; REM_repeat.
InterPro; IPR002290; Ser_thr_pkinase.
Pfam; PF00130; DAG_PE-bind; 2.
Pfam; PF00130; DAG_PE-bind; 2.
Pfam; PF00143; pkinase; 1.
Pfam; PF00433; pkinase; 1.
Pfam; PF00433; pkinase_C; 1.
SMART; SM00109; C1; 2.
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SMART; SM00133; S_TK_X; 1.

SMART; SM00123; S_TK_Y; 1.

SMART; SM00220; S_TK_Y; 1.

PROSITE; PS00479; DAG_PE_BIND_DOM_1; 2.

PROSITE; PS50081; DAG_PE_BIND_DOM_2; 2.

PROSITE; PS00107; PROTEIN_KINASE_ATP, 1.

PROSITE; PS001108; PROTEIN_KINASE_ST; 1.

PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                        EMBL; Y15839; CAA75801.1; -. HSSP; P05132; 1APM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COCHE

KRC1_COCHE STANDARD: PRT: 1174 AA. 042632;
15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Protein kinase C-like (EC 2.7.1.-).
PKC1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Fungi; Ascomycota; Pezizomycotina; Pleosporales; Pleosporaceae; Cochliobolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cochliobolus heterostrophus (Drechslera maydis).
                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACT_SITE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Transferase; Serine/threonine-protein kinase; ATP-binding; Zinc; Phorbol-ester binding; Repeat.
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                                                                                                                                                                                                                                                                                                                     SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES
                                                                                                                                                                                                                                                                                                              PKC SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ter binding; Repeat.
414 461 PH
481 530 PH
664 923 PR
670 678 AT
693 693 AT
789 789 BY
27 35 AM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               988 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                111783 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41.0%;
58.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PHORBOL-ESTER AND DAG BINDING 1
PHORBOL-ESTER AND DAG BINDING 2
PROTEIN KINASE.
ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2; Mismatches
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7; 0969BDEClAB43C4E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Dothideomycetes;
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Qy
                                                                                                                     Matches
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Best Local 9
                                                                                                                        Phorbol-ester binding; Repeat.

DOMAIN 459 506 PHC

DOMAIN 527 576 PHC

DOMAIN 704 709 POI

DOMAIN 785 792 POI

DOMAIN 849 1108 PRC

NP_BINDING 878 878 ATI

BINDING 878 878 BY

ACT_SITE 974 974 Mg.
                                                                                                                                                                                                                                                         SMART; SM00239; C2; 1.

SMART; SM00074; HR; 2.

SMART; SM00133; S_TK_x; 1.

SMART; SM00220; S_TKC; 1.

SMART; SM00220; S_TKC; 1.

PROSITE; PS00479; DAG_PE_BIND_DOM_1; 2.

PROSITE; PS050081; DAG_PE_BIND_DOM_2; 2.

PROSITE; PS050017; PROTEIN_KINASE_ATP; 1.

PROSITE; PS050018; PROTEIN_KINASE_ST; 1.

PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
                                                                                                                   NP_BIND
BINDING
ACT_SITE
SEQUENCE
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996 CKEEMWYGSTTSTFCGTP 1013
                        1 CASEL--GKSTNTFCKPP 16
                                                 h 41.0%;
Similarity 44.4%;
8; Conservative
                                                                                                                   1174 AA;
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PROTEIN KINASE.
ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
                                                             Score 41; DB
Pred. No. 57;
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                                                 Mismatches
                                                                                                                              SIMILARITY
                                                                                                              26A4ADD42849F37C CRC64;
                                                                         DB 1;
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                                                                         Length 1174;
                                               5; Indels
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Search completed: June 17, 2002, 16:24:28 Job time: 1557 sec

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Perfect score:
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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Match Length
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Q9I8V8
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                                                                                                                                        Q91ze4 rattus norv
Q91zh6 meriones un
Q91za rattus norv
Q91ze3 rattus co
Q97352 coturnix co
Q9xs50 bos taurus
                                     O18118 caenorhabdi
O9nm00 leishmania
O9c6r6 arabidopsis
O9c6f7 arabidopsis
Q62288 mus musculu
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                                                                                                     Q9cud6 mus musculu
Q9i8v8 rana pipien
Q91tj8 arabidopsis
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Q91ZE4;
Q1-DEC-2001 (TrEMBLrel. 19,
Q1-DEC-2001 (TrEMBLrel. 19,
Q1-DEC-2001 (TrEMBLrel. 19,
Q91ZH6;
Q91ZH6;
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                           STRAIN-SPRAGUE-DAWLEY;

Kirkin V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J.,

Repper M.S., Giannis A., Sleeman J.P.;

"Characterization of indolinones which specifically inhibit VEGF-C-and

"Characterization of vEGFR-3 but not VEGFR-2.";

EUR. J. Biochem. 0:0-0(2001).

EMBL; AY032728; AAK96008.1;

SEQUENCE 326 AA; 37106 MW; D7CAEBA6C9FABB7D CRC64;
                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                        VEGF-D.
                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10116;
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                                                                                                          126 ASELGKTTNTFFKPPC 141
                                                                                                                                                           Local Similarity
les 14; Conserva
                                                                                                                      2 ASELGKSTNTFCKPPC 17
                                                                  N
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(TrEMBLrel. 19, (TrEMBLrel. 19,
                                         PRELIMINARY;
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87.5%;
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Last annotation update)
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                                                                                                                                                                          Score 77; DB 11; Length 326; Pred. No. 2.6e-05;
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0;

Q9FHK1 Q9FLD9

Q9ve57 drosophila Q9fhkl arabidopsis Q9fld9 arabidopsis

01-DEC-2001

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O1-JUN-1998 (TrEMBLrel. 0
O1-JUN-1998 (TrEMBLrel. 0
O1-DEC-2001 (TrEMBLrel. 1
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Best Local :
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Q91ZE3;
01-DEC-2001 (TrEMBLrel. 19, C
01-DEC-2001 (TrEMBLrel. 19, L
01-DEC-2001 (TrEMBLrel. 19, L
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       Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-SPRAGUE-DAWLEY;

Kirkin V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J.,

Pepper M.S., Giannis A., Sieeman J.P.;

"Characterization of indolinones which specifically inhibit VEGF-C-and

VEGF-D-induced activation of VEGFR-3 but not VEGFR-2.";

Eur. J. Biochem. 0:0-0(2001).

EMBL: AY032729; AAK96009.1; -

SEQUENCE 415 AA; 46397 MW; IEB677F5B260A525 CRC64;
                             Coturnix coturnix (common
                                                                            VASCULAR ENDOTHELIAL GROWTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                             139
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Panilaitis B.J., Fuhrman J.A.; "Brugia malayi stimulates VEGF-C, a growth factor specific lymphatic endothelium, by an indirect mechanism."; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Meriones unguiculatus (Mongolian jird).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                              (TremBLrel. 06, Created)
(TremBLrel. 06, Last sequent (TremBLrel. 19, Last annotation)
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         Chordata;
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71.4%;
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71.4%;
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FACTOR C PRECURSOR.
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    Craniata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D0B2772C77836914 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence update)
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                                                                                                                                                                                            418 AA.
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Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 11;
0.034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11; Length 415;
                                                                                                                                                                                                                                                                                                                                                                                                                                   .043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
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                                                                                                                                                                                                                                                                                                                                                                                                       Indels
  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                       0;
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                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                  0,
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DAC
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Q9XS50
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                                                                                                                                                                                                                                                                                                       Q9XS50 PRELIMINARY;
Q9XS50;
01-NOV-1999 (TrEMBLrel. 12, C:
01-NOV-1999 (TrEMBLrel. 12, L:
01-DEC-2001 (TrEMBLrel. 19, L:
VASCULAR ENDOTHELIAL GROWTH E)
        ProDom; PD001629; PDGF; 1. SMART; SM00141; PDGF; 1.
                                Pfam; PF03128; CXCXC; Pfam; PF00341; PDGF;
                                                                                             Inplication in autocrine and paracrin
J. Biol. Chem. 274:35172-35178(1999).
EMBL; AB004275; BAA77687.1; .
                                                                                                                               Yonekura H., Sakurai S., Liu X., Migita H., Wang H., Yamagishi S., Nomura M., Abedin M.J., Unoki H., Yamamoto Y., Yamamoto H.; "Placenta growth factor and vascular endothelial growth factor B a expression in microvascular endothelial cells and pericytes.
                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea Bovinae; Bos.
                                                         InterPro; IPR004153; CXCXC.
InterPro; IPR00072; PDGF.
                                                                                      HSSP; P15692; 1VPP
                                                                                                                                                                                      MEDLINE=20044783; PubMed=10575000;
                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                             NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                   Bos taurus (Bovine)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART; SM00067; GHA; 1
SMART; SM00141; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro: IPR000072; pbgr Pfam; PF03128; CXCXC; 6. Pfam; PF030341; PDGF; 1. PRINTS; PR00438; GFCYSKNOT. PT0D0m; PD001629; PbgF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                          142 EFGATTNTFFKPPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR002400; GF_cysknot.
InterPro; IPR000476; Glyco_hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; Y15837; CAA75799.1; -- HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of the differentiation of VEGFR2 expressing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WEDLINE=98167900; PubMed=9435294;
Eichmann A., Corbel C., Jaffredo T.,
Alitalo K., Le Douarin N.M.;
"Avian VEGF-C: Cloning, embryonic exp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR004153; CXCXC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Development 125:743-752(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           precursors."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Archosauria; Aves; Neognathae; Galliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9091;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 ELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46839
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71.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M.
                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation updat
FACTOR C PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                    endocherial Cells and pericytes.
paracrine regulation of angiogenesis.";
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VASCULAR ENDOTHELIAL GROWTH FACTOR

; 099BFCC79151BF2B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
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                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                 Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                        420 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Breant V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13; Length 418;
                                                                                                                                                                                                                                                                                                                      update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Phasianidae; Phasianinae;
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PROSITE;

PS00249;

PDGF\_1; 1.

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   RESULT
Q918V8
ID Q9
AC Q9
DT 01
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RA Kawai J., Shinagawa A., Shibata Y., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Kando S., Yamanaka I.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kudota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kudota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Bulke J., Barsh G., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Sasaki H., Sato K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Maynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                          밁
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SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9CUD6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9CUD6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=C57BL/6J; TISSUE=TESTIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4933403G14RIK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
EMBL; AK016632; BAB30348.1; -.
Q918V8 PRELIMINARY; PRT;
Q918V8;
Q1-OCT-2000 (TrEMBLrel. 15, Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                             259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 ELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                    Local Similarity
les 9; Conserv
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                                                                                                                                                                                                                                                                                     3 SELGKSTNTFCKPP 16
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                                                                                                                                                                                                                             TELDFETNTFCPPP
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420
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Rodentia;
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71.4%;
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                                                                                                                                                                                                                                                                                                                                                                                  50.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                     Score 50;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AFE42D3971F1F954 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                          DB 11; Length 889;
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                                                                                                                                                                                                                                                                                                                                                              0;
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RESULT
Q9LTJ8
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                           018118
                                       RESULT
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Best Local Similarity
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Best Local
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01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
ONCONASE VARIANT RAPLRI PRECURSOR.
Rana pipiens (Northern leopard frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pfam; PF00074; rnaseA; 1.
proDom; PD000535; RNaseA; 1.
smart; sm00092; RNAse_Pc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chen S.-L., Le S.-Y., Newton D.L., Maizel J.V. Jr., Rybak S.M.;
"A gender-specific mRNA encoding a cytotoxic ribonuclease contains
3' UTR of unusual length and structure.";
Nucleic Acids Res. 28:2375-2382(2000).
018118
018118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AF165133; AAI
HSSP; P22069; 10NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=20330357; PubMed=10871370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=8404;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Signal.
                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosid
                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation updat
GENOMIC DNA, CHROMOSOME 5, BAC CLONE:F17P19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00127; RNASE_PANCREATIC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                     "Structural analysis of Arabidopsis thaliana chromosome 5. XI."; Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AB025603; BAA97466.1; -
SEQUENCE 746 AA; 82656 MW; A0EACB409EB5953A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9LTJ8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8rtl6
                                                                                                                                                                                                                                                           Kaneko T., Katoh T., Asamizu E., Sato S., Nakamura Y., Kotani H.,
Tabata S.;
                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                             eurosids II; Brassicales; Brassicaceae; Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                      Arabidopsis thaliana (Mouse-ear cress).
                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=3702;
                                                                                 583 CSEVMEKSTNSFSSAFDSTLADLCKDPC 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98 CKYKLKKSTNTFC 110
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                                                                                                         1 CASELGKSTNTF-----CKPPC 17
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                                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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             PRELIMINARY;
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14491 MW;
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                                                                                                                                                    48.5%;
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Pred. No.
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                                                                                                                                                    Score 48.5;
Pred. No. 5.
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                 PRT;
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               330 AA.
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                                                                                                                                                                    DB
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                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                               core eudicots; Rosidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 127;
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                                                                                                                                           Indels
                                                                                                                                                                  Length 746;
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RESULT
Q9C6R6
ID Q9
AC Q9
DT 01
DT 01
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Q9NM00
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Best Local (
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               Q9C6R6;
Q9C6R6;
01-JUN-2001
 01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                   Q9NM00;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
HYPOTHETICAL 12.7 KDA PROTEIN (FRAGMENT).
                                                                                                                                                                                                                   Murphy L., Quail M., Harris D., Rajandream M., Submitted (JUL-2000) to the EMBL/GenBank/DDBJ EMBL: AL160493; CAB97910.1; -.
                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                      Hypothetical protein. NON_TER 1
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01-JAN-1998
01-DEC-2001
                                                                                                                                                                                                                                                           STRAIN-FRIEDLIN;
                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                       Eukaryota;
                                                                                                                                                                                                                                                                                            NCBI_TaxID=5664;
                                                                                                                                                                                                                                                                                                              Leishmania major
                                                                                                                                                                                                                                                                                                                                                                                             Q9NM00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       investigating biology.";
Science 282:2012-2018(1998).
EMBL; 281129; CAB03405.1; -.
InterPro; IPR003341; DUF139.
Pfam; PF02363; DUF139; 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wilkinson
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Rhabditidae; Peloder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Caenorhabditis elegans
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T23F1.6.
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                                                                                            46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genome sequence of the nematode C.elegans: A platform for
                                                                                                                                     Local Similarity
tes 8; Consert
                                                                                                             1 CASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                              80 CSQQCQSNTNTQCQPTC 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity les 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CASELGKSTNTFCKPPC 17
                                                                                       CAATAAKSTISHCATPC 62
                                                                                                                                                                                        115 AA;
                                                                                                                                                                                                                                                                                                     Euglenozoa;
                                   PRELIMINARY;
                                                                                                                                  Conservative
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8 (TrEMBLrel.
1 (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                        12657 MW;
                                                                                                                                             46.0%;
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05, Last sequ
19, Last anno
Created)
Last sequence update)
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Last annotation update)
                                                                                                                                            Score 46; |
Pred. No. 2
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4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 48; I
Pred. No. 2
                                   PRT;
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                                                                                                                                                                                      7E73C84D80B2B733 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F043B1A90D3A8FE9 CRC64;
                                                                                                                                  Mismatches
                                 367
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2.8;
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                                                                                                                                7;
                                                                                                                                                      Length 115;
                                                                                                                                                                                                                                          Ivens A., Barrell
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RX MEDLING-21016719; PubMed-11130712;

RA Mite O., Alonso J., Altafi H., Araujo R., Bowman C.L., Brooks S.Y.,

RA White O., Alonso J., Altafi H., Araujo R., Bowman C.L., Brooks S.Y.,

RA Buehler E., Chan A., Chao Q., Chen H., Cheuk R.F., Chin C.W.,

RA Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K.,

RA Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K.,

RA Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K.,

RA Hunter J.L., Jenkins J., Johnson-Hopson C., Khan S., Khaykin E.,

RA Hunter J.L., Jenkins J., Johnson-Hopson C., Khan S., Khaykin E.,

RA Kim C.J., Koo H.L., Kremenetskaia I., Kurtz D.B., Kwan A., Lam B.,

RA Langin-Hooper S., Lee A., Lee J.M., Lenz C.A., Li J.H., Li Y.-P.,

RA Lin X., Liu S.X., Liu Z.A., Luros J.S., Maiti R., Marziali A.,

RA Militscher J., Miranda M., Nguyen M., Nierman W.C., Osborne B.I.,

RA Pai G., Peterson J., Pham P.K., Rizzo M., Rooney T., Rowley D.,

RA Sakano H., Salzerg S.L., Schwartz J.R., Shinn P., Southwick A.M.,

RA Sakano H., Salzerg S.L., Schwartz J.R., Shinn P., Southwick A.M.,

RA Wu D., Yu G., Fraser C.M., Venter J.C., Davis R.W.;

"Scoulence and analysis of chromosome 1 of the clant arabidonals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
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Theologis A., Ecker J.R., Palm C.J., Federspiel N.A., Kaul S., White O., Alonso J., Altafi H., Araujo R., Bowman C.L., Brooks S.Y., Buehler E., Chan A., Chao Q., Chen H., Cheuk R.F., Chin C.W., Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K., Dunn P., Etgu P., Feldblyum T.V., Feng J.-D., Fong B., Fujii C.Y.,
                                                                                                                                                                                                                                 Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosid
                                                                                                                                                                                                                                                                                                                                                                                                             Q9C6F7;
                                                                                                                                                                                                                                                                                                                      01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-OCT-2001 (TrEMBLrel. 18, Last annotation updat
HYPOTHETICAL 42.9 KDA PROTEIN.
                                                                                                               MEDLINE=21016719; PubMed=11130712;
                                                                                                                                         STRAIN-CV.
                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                             T15M6.10
                                                                                                                                                                                                    NCBI_TaxID=3702
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EMBL; AC079131; AAG50757.1; -.

InterPro: IPR001810; F-box.

Pfam; PF00646; F-box; 1.

SMART; SM00256; FBOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hypothetical protein.
NON_TER 1
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220 SKEIEKSRKTFCVLPC 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Sequence and analysis of chromosome 1 of the plant Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 ASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                   II; Brassicales; Brassicaceae; Arabidopsis
                                                                                                                                         COLUMBIA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367 AA; 42444 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COLUMBIA;
                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
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50.0%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  751C6164205E7BA4 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                 371 AA
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                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                     core eudicots; Rosidae;
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Q62288
ID Q62288
AC Q62288
DT Q1-FEB
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Best Local
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"Sequence and analysis of chromosome 1 of the plant Arabidopsis thaliana.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q62288 PRELIMINARY; PRT; 442 AA. Q62288; Q1-FEB-1997 (TrEMBLrel. 02, Created) Q1-FEB-1997 (TrEMBLrel. 02, Last sequence update) Q1-JUN-2001 (TrEMBLrel. 17, Last annotation update) SPOCK PROTEIN PRECURSOR (TESTICAN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hypothetical SEQUENCE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00646; F-box; 1.
SMART; SM00256; FBOX; 1.
PROSITE; PS50181; FBOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 408:816-820(2000).
EMBL; AC079604; AAG50706.1; .
InterPro; IPR001810; F-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Association with the postsynaptic area of hippocampus pyramidal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bonnet F., Perin J.P., Char
Nussbaum J.L., Alliel P.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=BALB/C; TISSUE=BRAIN; MEDLINE=96224019; PubMed=862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPOCK OR SPOCK1 OR TICN1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *Structure and cellular distribution of mouse brain testican
      pfam; pF00050; kazal; 1.
pfam; pF00086; thyroglobulin_1; 1.
smarT; SM00280; KAZAL; 1.
                                                                                              MGD; MGI:105371; Spock1.
InterPro; IPR000561; EGF-like.
InterPro; IPR002350; kazal.
InterPro; IPR000716; Thyroglobulin_1.
                                                                                                                                                                                          EMBL; x92864; CAA63448.1; -. MGD; MGI:105371; Spock1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                224 SKEIEKSRKTFCVLPC 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
nes 8; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 ASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                        BIO1. Chem. 271:4373-4380(1996).
FUNCTION: MAY PLAY A ROLE IN CELL-CELL AND CELL-MATRIX
INTERACTIONS. MAY CONTRIBUTE TO VARIOUS NEURONAL MECHANISMS IN CENTRAL MERVOUS SYSTEM.
TISSUE SPECIFICITY: PREDOMINANTLY EXPRESSED IN THE POSTSYNAPTIC
                                                                                                                                                                                                                                                 SIMILARITY: CONTAINS 4 OSTEONECTIN-LIKE DOMAINS.
SIMILARITY: CONTAINS 1 EGF-LIKE DOMAIN.
SIMILARITY: CONTAINS 1 THYROGLOBULIN TYPE-I DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                    PTM: CONTAINS CHRONDROITIN SULFATE AND HEPARAN SULFATE O-LINKED
                                                                                                                                                                                                                                                                                                                                             OLIGOSACCHARIDES.
                                                                                                                                                                                                                                                                                                                                                                                                              AREA OF PYRAMIDAL NEURONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     371 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=8626787; *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42890 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 45;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FCC77E57A1990457 CRC64;
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No. 10;
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             RA Addams M.D., Celniker S.E., Li P.W., Hoskins R.A., Gocayne J.D.,
RA Addams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Randell M.D., Zhang O., Chen L.X.,
RA George R.A., Lewis S.E., Randell M.D., Zhang O., Chen L.X.,
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Abril J.F., Agbayani A., An H.-J., Bayraktaroglu L., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Geharty J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gebry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gebry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gebry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gebry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Godson K.J., Deugan D.A., Bugan-Rocha S., Dunkov B.C., Dunn P.,
RA Harris N.J., Deltita A.C., Ferraz C., Ferraz C., Ferritera S., Fleischmann W.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Mcimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Mcimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Mcimmel B.E., Kodira C.D., Kraft C., Mcirch M.P., McPherson D.,
RA Mcimmel B.E., Kodira C.D., Mcimmel B., Mcimmel B., Mcimmel 
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SEQUENCE
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DOMAIN
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PROSITE; PS00484; THYROGLOBULIN_1; 1.

PROSITE; PS00484; THYROGLOBULIN_1; 1.

PROSITE; PS00484; THYROGLOBULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O9VE57; PRELIMINARY;
O9VE57; O1-MAY-2000 (TrEMBLrel. 13,
01-MAY-2000 (TrEMBLrel. 13,
01-JUN-2001 (TrEMBLrel. 17,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Arthropoda; Pterygota; Neoptera; Endopterygo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CG7695.
Drosophila melanogaster (Fruit fly).
Drosophila melanogaster (Fruit fly).
----- Brachvcera; Musc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-BERKELEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ephydroidea; Drosophilidae; Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168 ACSTGKSLNSLCDGPC 183
   Shue B.C., Siden-Kiamos I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 ASELGKSTNTFCKPPC 17
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8; Conserv
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50.0%;
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OSTEONECTIN-LIKE.
OSTEONECTIN-LIKE.
OSTEONECTIN-LIKE.
THYROGLOBULIN TYPE I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
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Pred. No.
   Simpson M., Skupski M.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O-LINKED (GLYCOSAMINOGLYCAN)
O-LINKED (GLYCOSAMINOGLYCAN)
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12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
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RESULT Q9FK11
ID Q9F AC Q9F AC Q9F DT Q11
CC GELL
QC SPL
QC SPL
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QC ST SER
RA SE
Search completed: June 17, 2002, 16:23:38 Job time: \[ \ddots \]_{612} \] sec
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Best Local Similarity
"-+-hes 8; Conserve
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RA Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA YE J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
Zhong X.H., Zhong F.N., Zhong W., Zhu S., Zhu X., Smith H.O.,
RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;
"The genome sequence of Drosophila melanogaster.";
Science 287:2185-2195(2000).
DR EMBL; AE003723; AAF55572.1; ...
DR F19Base; FB90023603; CG7695.
DR F19Base; FB9002363; CG7695.
DR F19Base; FB900050; kazal; 1.
DR Pfam; PF00050; kazal; 1.
DR SAART; SM00280; KAZAL; 1.
                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Structural analysis of Arabidopsis thaliana chromosome 5. X. Sequence features of the regions of 3,076,755 bp covered by sixty P1 and TAC clones.";

DNA Res. 7:31-63(2000).

EMBL; AB018112; BAB10975.1; ---
EMBL; AB026661; BAB10975.1; JOINED.
InterPro; IPR001810; F-box.
Pfam; PF00646; F-box; 1.
PART; SM00256; FBOX; 1.
PROSITE; PS50181; FBOX; 1.
PROSITE; PS50181; FBOX; 1.
SMART; SM00256; FBOX; 1.
SMART; SM00256; FBOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9FHK1 PRELIMINARY; PRT; 471 AA.
Q9FHK1;
Q9FHK1;
Q1-MAR-2001 (TrEMBLrel. 16, Created)
Q1-MAR-2001 (TrEMBLrel. 17, Last sequence update)
Q1-UN-2001 (TrEMBLrel. 17, Last annotation update)
GENOMIC DNA, CHROMOSOME 5, P1 CLONE.MAB16.
Arabildopsis thaliana (Mouse-ear cress)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-20181125; PubMed-10718197;
Sato S., Nakamura Y., Kaneko T., Katoh T., Asamizu E., Kotani H.,
                                                                                                                                                                     365 DLGESTNKYCYP 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-COLUMBIA;
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                                                                                                                                                                                                                                                                                                         Local Similarity
nes 7; Conserv
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                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       55212 MW; 1E5D997B7942E26C CRC64;
                                                                                                                                                                                                                                                                                                                                    44.0%;
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53.3%;
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OM protein -
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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using sw model
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A_Geneseq_032802:*

| SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1980.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1981.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1982.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1984.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1985.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1985.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1986.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                             | SIDSI/gcgdata/hold-genesed/geneseqp-embl/AA198.DAT:*
| SIDSI/gcgdata/hold-genesed/geneseqp-embl/AA198.DAT:*
| SIDSI/gcgdata/hold-genesed/geneseqp-embl/AA198.DAT:*
| SIDSI/gcgdata/hold-genesed/geneseqp-embl/AA198.DAT:*
| SIDSI/gcgdata/hold-genesed/geneseqp-embl/AA199.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CASELGKSTNTFCKPPC 17
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80	80	80	68	93	93	93	97	97	100	Score
80.0	80.0	80.0	89.0	93.0	93.0	93.0	97.0	97.0	100.0	Query Match Length DB
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21	22	22	22	22	22	22	22	22	22	æ
AAB11931	AAU04520	AAU04522	AAU04548	AAU04551	AAU04549	AAU04547	AAU04550	AAU04546	AAU04527	ID
	Human vascular end	Human VEGF-D amino	VEGF based bicycli	VEGF based bicycli	VEGF based bicycli	VEGE based bicycli	VEGE based bicycli	based	VEGF based bicycli	Description

45	44	43	42	41	40	39	38 8	37	36	35 5	ω <b>4</b>	ယ	32	ω H	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12
58	58	58	58	59	59	59	59	61	65	65	69	72	77	77	77	77	77	77	77	80	80	80	80	80	80	80	80	80	80	80	80	80	80
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AAUU8422	AAU08486	AAU08480	AAU08479	AAW75743	AAW00934	AAW75742	AAW00933	AAU04536	AAU04537	AAU04535	AAU04534	AAU04524	AAW44295	AAW53242	AAW14992	AAY08286	AAW44296	AAW53243	AAY08287	AAW14994	AAB37606	AAY97573	AAB70685	AAU08441	AAY70983	AAY70750	AAB29049	AAB10649	AAW4 4 2 9 3	AAW53241	AAW49036	AAY97572	AAW53240
FOIMPebrine emocre	VEGENTA DIRECTO	** *****	# 5 +	ascu		vascu			based	based	based	based	vascu	Mus musculus vascu			_		an growth	~		AEGE-DT E	Human vascular end	Polypeptide for nu		Human prepro-vascu	Human VEGE-D proce	Human VEGD protein		Homo sapiens vascu			sapiens

## ALIGNMENTS

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AAU04527
                                                                                                                                                                                                                                                               neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                 AAU04527 standard; Protein; 17
                                                                                                                                                                                                                                                                                                       Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                   VEGF based bicyclic dimeric peptide #1.
                                                                                                                                                                                                                                                                                                                                                                                        AAU04527;
                                                                                                                                                                          Disulfide-bond
                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                             26-SEP-2001 (first entry)
18-JAN-2000; 2000US-0176293
16-MAY-2000; 2000US-0204590
                                        18-JAN-2001; 2001WO-US01533.
                                                                                                                                                                                                   Disulfide-bond
                                                                   26-JUL-2001.
                                                                                            WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                           ш
                                                                                                                                                                          /note= "This bond cyclises the peptide"
17
                                                                                                                                                                                                   Location/Qualifiers
1..13
                                                                                                                    /note= "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form a dimeric peptide, or to residue 1 of the sequence appearing as AAUU4528, also forming a dimeric pepti
                                                                                                                        peptide"
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RESULT
AAU04546
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Disulfide-bond
                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cerebrovascular accident, post-angioplasty restenosis, head, heat or coltrauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular infection. The peptides are also used to modulate vascular permeability accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The momomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF. Cor -D and chronic inflammation, especially rheumatoid arthritis, psoriasis and diabetic retinonathy.
                                                                                                                                    Human; VEGF; vascular endothelial growth factor; anglogenesis;
                                                                                                                                                                              VEGF based bicyclic dimeric peptide #3
                                                                                                                                                                                                                     26-SEP-2001 (first entry)
                                                                                  diabetic retinopathy; chronic inflammation; cyclic
                                                                                               neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                               AAU04546 standard; Peptide; 17 AA
                                                                                                                                                                                                                                                                  AAU04546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. hemangioma, vascularised malignant or benjan tumour, post-recovery nerehrovascularised malignant or benjan tumour, post-recovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequence represents a dimeric bicyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 59; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-442248/47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        eta beta carbon separation distances on opposite antiparallel strands of peptide loop fragment from an exposed loop of a growth factor protein
                                                                                                                                                                                                                                                                                                                                                                                       1 CASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 100; DB 22;
Pred. No. 2.9e-08;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            heat or cold
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                          AAU04550
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AAU04550 standard; Peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                      hormone related anglogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptides (comprising 2 linked deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, cerebrovascular accident, post-angioplasty restenosis, head, heat or cold hormanna-related angiogenesis dues financed covery cerebrovascular accident, when the condition of the liver, excessive hormanna-related angiogenesis dues financed to the liver, excessive
                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                    diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequence represents a dimeric bicyclic peptide of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Achen MG, Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JAN-2000; 2000US-0176293
16-MAY-2000; 2000US-0204590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disulfide-bond
                                                                                                                                                                                                                 Local
                                                                                                        ш
                                                                                                                                           1 CASELGKSTNTFCKPPC 17
                                           ω
                                                                                                    catelgkstntfckppc 17
                                                                                                                                                                                           16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3-dimensional structure is modelled on
                                                                                                                                                                                                          Similarity
                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "This bond cyclises the peptide" 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form
                                                                                                                                                                                                        97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stacker S,
                                                                                                                                                                                  Score 97; DB 22
Pred. No. 8e-08;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cendron A;
                                                                                                                                                                                                                       DB 22; Length 17;
                                                                                                                                                                                    0
                                                                                                                                                                              0;
                                                                                                                                                                              Gaps
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AAU04550

В ρy

DB 22; Length 17;

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cc a peptide loop fragment from an exposed loop of a growth factor protein cc and cyclising the peptide by oxidising the cysteine residues. The cc monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked cc monocyclic peptides) and a cyclic peptide with at least one amino acid cc monocyclic peptides) and a cyclic peptide with at least one amino acid cc meovascularisation or lymphangiogenesis in a mammal with a condition cc characterised by angiogenesis, periode with at least one amino acid cc rehe condition is diabetic retinopathy, psoriasis, arthropathy, cc remangioma, vascularised malignant or benigh tumour, post-recovery cc hemangioma, vascularised malignant or benigh tumour, post-recovery cc retrauma, substance-induced neovascularisation of the liver, excessive cc infection. The peptides are also used to modulate vascular permeability in amammal (the mammal has a condition characterised by fluid or brain. The peptides are used to image blood vessels and lymphatic cor are also used in combination with an anti-inflammatory agent, to treat a cc chronic inflammatory and in reprimeral lymphatic corporation inflammatory and arthritis neoriasis and cc corporation in anoti-inflammatory agent, to treat a cropic inflammation accidently repumbatic archivity induced by VEGF, VEGF-C or -D and creation inflammatory agent, to treat a cropic inflammation accidently repumbatic and arthritis neoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VEGF based bicyclic dimeric peptide #7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-JUL-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel monomeric monocyclic peptide, used to interfere with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      beta-beta carbon separation distances on opposite antiparallel strands of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence represents a dimeric bicyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of huma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JAN-2000;
                                       diabetic retinopathy.
                                                             chronic inflammation, especially rheumatoid arthritis, psoriasis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0176293.
2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "This bond cyclises the peptide"
17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "A disulfide bond forms between residue 17 and residue 1 of the sequence appearing as AAU04528, forming a dimeric peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers 1..13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stacker S, Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the expose loop of human
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Sequence

17 AA

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RESULT
AAU04547
  Matches
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human: VEGF; vascular endothelial growth factor; anglogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU04547 standard; Peptide; 17
                                                       The sequence represents a dimeric bicyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human vEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides, and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, meovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery hemangiogenia, accident nost-raccional setuposis, head, heat or cold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VEGF based bicyclic dimeric peptide #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU04547
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-SEP-2001 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                            oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JAN-2000; 2000US-0176293
16-MAY-2000; 2000US-0204590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JAN-2001; 2001WO-US01533
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                                                                                                                                                                                                                                                                                                                                                                                                  Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (LUDW-) LUDWIG INST CANCER RES
hormone-related angiogenic dysfunction,
                    cerebrovascular accident, post-angioplasty restenosis, head, heat or trauma, substance-induced neovascularisation of the liver, excessive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 caselgkstntyckppc 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CASELGKSTNTFCKPPC 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "A disulfide bond forms between residue 17 and residue 17 of an identical peptide to form a dimeric peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note= "This bond cyclises the peptide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stacker S, Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 97; DB 22
Pred. No. 8e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
         diabetes induced neovascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                  head, heat or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
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RESULT
AAU04549
ID AAU0
XX AAU0
AC AAU0
XX 26-S
DE VEGF
XW Huma
KW Cdlak
KW dlak
KW dlak
KW dlak
FT Dls
FT Dls
FT Dls
FT Bl-
XX WO2(
XX ET ACh
XX IB-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
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                                                                                                Example 26; Page 49; 102pp; English.
                                                                                                                                                                              Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-JAN-2000;
16-MAY-2000;
                                                                                                                                                               oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                WPI; 2001-442248/47
                                                                                                                                                                                                                                                                                                                                                                                                                                (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JAN-2001; 2001WO-US01533.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diabetic retinopathy; chronic inflammation; cyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neovascularisation; lymphanglogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEGF based bicyclic dimeric peptide #6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU04549;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU04549 standard; Peptide; 17 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||||::|||||||
| caselgktsntfckppc 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CASELGKSTNTFCKPPC 17
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                                                                                                                                                                                                                                                                                                                                                                       Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0176293.
2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a dimeric peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
1..13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "A disulfide bond forms between residue 17 and residue 17 of an ideation"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93.0%;
88.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            residue 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 93; [
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of an identical peptide
                                                                                                                                                                                                                                                                                                                                                             Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2e-07;
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                                                                                                                                                                                                             peptide
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whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to

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Вb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
            (LUDW-) LUDWIG INST CANCER RES
                                                18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                      18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                    WO200152875-A1.
                                                                                                                                                                                                                                                                                 Disulfide-bond
                                                                                                                                                                                                                                                                                                                         Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                              neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; VEGF; vascular endothelial growth factor; anglogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hormone related anglogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psorlasis and diabetic variances.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VEGF based bicyclic dimeric peptide #8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU04551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU04551 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psorlasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or trauma, substance-induced neovascularisation of the liver, excessive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neovascularisation or lymphangiogenesis in a mammal with a condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                   /note= "This bond cyclises the peptide" 17
                                                                                                                                                                                                                     /note= "A disulfide bond forms between residue
17 and residue 1 of the sequence appearing as AAU04528,
forming a dimeric peptide"
                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.0%;
88.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 93; DB 22; Pred. No. 3.2e-07; """ matches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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RESULT
AAU04548
ID AAU0
XX AAU0
XX AAU0
XX AAU0
XX PEFF
XX Huma
KW Huma
KW neov
KW diab
XX OS Synt
XX Synt
XX FFF Key
FFT Disu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hormone related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF. VEGF-C or 'D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            characterised by anglogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angloplasty restenosis, head, heat or contrauma, substance-induced neovascularisation of the liver, excessive trauma, substance-induced neovascularisation of the liver, excessive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence represents a dimeric bicyclic peptide of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       diabetic retinopathy.
                                                                                                                                                                           neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                              Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                      AAU04548
                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU04548 standard; Peptide; 17 AA
                     Disulfide-bond
                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                VEGF based bicyclic dimeric peptide #5.
                                                                                                                                                                                                                                                                                                                                         26-SEP-2001 (first entry)
                                                                     Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 caselgrstnsfckppc 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CASELGKSTNTFCKPPC 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                        Location/Qualifiers
  /note= "A disulfide bond forms between residue
                                               'note= "This bond cyclises the peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 93; DB 22;
Pred. No. 3.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             head, heat or cold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
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밁

Matches

Conservative

Mismatches

0;

Gaps

XXXXX

26-SEP-2001

(first entry)

AAU04522

æ

AAU04522 standard; protein;

73 AA

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cc whose 3-dimensional structure is modelled on the expose loop of human CC wEGFD (vascular endothelial growth factor). The invention relates to a CC method of producing a monomeric monocyclic peptide by a measuring CC method of producing a monomeric monocyclic peptide by a measuring CC and cyclising the peptide by oxidising the cyclic peptides. The CC and cyclic peptides, dimeric bicyclic peptides (comprising 2 linked CC monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with anjogenesis. CC characterised by angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition CC characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, psoriasis, arthropathy, cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive crauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver in fection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to induced vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF. Or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and content of the peptides are also used to mathritis, psoriasis and content of the peptides are used to interfere with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and
                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200152875-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 26; Page 49; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oxidizing the cysteine residues
                                                                                         Sequence
                                                                                                                                         diabetic retinopathy.
Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hughes RA,
                                                                                            17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17 and residue 17 of an identical peptide to form
a dimeric peptide"
  89.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stacker S,
  Score 89; DB 22;
Pred. No. 1.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cendron A;
                           Length 17;
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Human VEGF-D amino acids Vall01-Thr 173.

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CC amino acids Vali01-Thr 173, used together with the C-terminal 23 CC residues of VEGF to make a hybrid theoretical molecule for 3 CC dimensional modelling. The sequence is used in a method of producing CC a monomeric monocyclic peptide by a measuring beta-beta carbon separation CC distances on opposite antiparallel strands of a peptide loop fragment CC peptide with at least one amino acid deleted prior to cyclisation are CC used to interfere with anglogenesis, neovascularisation or lymphangiogenesis, neovascularisation or lymphangiogenesis, neovascularisation or lymphangiogenesis. The condition characterised by cardinate retinopathy, psoriasis, arthropathy, hemangioma, vascularised CC post-angioplasty restenosis, head heat or cold trauma, substance-induced dysfunction, diabetes induced neovascular sequelae, or chronic liver infection. The peptides are also condition characterised by finid accumulation in peripheral limbs or in condition characterised by finid accumulation in peripheral limbs or in condition characterised by finid accumulation. The peptides are used to interfere with at least one biological activity and interfere with at least one biological activity can be perioded are used to interfere with at least one biological activity anti-inflammation with an combination with 
                                                                                                                  Query Match
Best Local :
                                                                                               Matches
                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel monomeric monocyclic peptide, used to interfere with anglogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-442248/47
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16-MAY-2000; 2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; VEGF-D; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
.21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200152875-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diabetic retinopathy; chronic
                                                                                                               Local
                         2 ASELGKSTNTFCKPPC 17
    aselgkstntffkppc 36
                                                                                             15;
                                                                                                             Similarity
                                                                                      Conservative
                                                                                                                                                                                                      73
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                                                                                                           80.0%;
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                                                                                      0
                                                                                                      Score 80; DB 22;
Pred. No. 0.00011;
                                                                                  Mismatches
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                                                                                                                        DB 22; Length 73;
                                                                                  Indels
                                                                               0;
                                                                             Gaps
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AAU04520

DЬ δÃ

21 aselgkstntffkppc

2 ASELGKSTNTFCKPPC 17

Matches

15;

Conservative

Local Similarity

93.8%;

Score 80; DB 22; Pred. No. 0.00015;

Length 96; Indels

0;

Gaps

0

Sequence

96

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DR XX
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PR
XX
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                                                                                                                                                                                                                            used to interfere with anglogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by anglogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, postiasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-anglogenesis, retinopathy, hemangioma, vascularised post-anglogenesis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related anglogenic horozascularisation of the liver, excessive hormone-related anglogenic
                                                                                                                                                                                                                                                                                                                                                                                 from an exposed loop of a growth factor protein and cyclising the by oxidising the cysteine residues. The monocyclic peptides, dimer bicyclic peptides (comprising 2 linked monocyclic peptides) and a peptide with at least one amono acid deleted prior to cyclisation
                            rheumatoid arthritis, psoriasis and diabetic retinopathy.
                                            induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequence represents Human VEGF-D (vascular endothelial growth factor) amino acids Vall01-PRO186. The sequence is used in a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 89; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 oxidizing the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-442248/47.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (LUDW-) LUDWIG INST CANCER RES
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16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diabetic retinopathy; chronic inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU04520 standard; protein; 96
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acids Vall01-pRO186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stacker S, Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                dimeric
                                                                                                                                                                                                                                                                                                                                                                                          cyclic
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RESULT 1
AAY23889
ID AAY2
                                                                                                                                                                                                                                                                                                                                    The present sequence represents human vascular endothelial growth CC factor (VEGF)-D. The specification describes a human cell line CC which stably expresses VEGF-D, or fragments/analogues having VEGF-D CC which stably expresses VEGF-D, or fragments/analogues having VEGF-D CC which stably expresses VEGF-D, or fragments/analogues having VEGF-D CC antibodies activity. VEGF-D antagonists, e.g. antisense nucleic actids CC or triplex DNA, VEGF-D variants or antibodies (especially chimeric CC antibodies), are useful for the treatment or alleviation of malignant CC estimulating amounts of VEGF-D can be administered to enhance the CC stimulating amounts of vEGF-D can be administered to enhance the healing CC estimulating amounts of vEGF-D can be used to treat lymphedema.

CC stimulating amounts of vEGF-D and be used to treat lymphedema.

CC endothelial proliferation stimulating amounts of VEGF-D can treat scleroderma. Vascularisation stimulating amounts of VEGF-D can be used to treat anhydrotic ectodermal dysplasia. VEGF-D antibodies are useful for detecting tumours expressing VEGF-D. Fully-processed VEGF-D can be used to stimulate at least one VEGF-D bloactivity chosen from can be used to stimulate at least one VEGF-D and differentiation controlled the controlled and differentiation and the controlled controlled contro
                                                                                                                    В
                      AAB11931
                                                RESULT
                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumour; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
wound healing; lymphedema; scleroderma; anhydrotic ectodermal dysplasia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human vascular endothelial growth factor (VEGF)-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-SEP-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY23889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09933485-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-MAY-1998;
24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 6; Page 72; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A human cell line stably expressing vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        factor D, useful for treating melanomas or tumours expressing VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
                                                                                                                                                                                                                                                                                                                                                                                  and lymphangiogenesis without inducing vascular permeability.
                                                                                                                                                                                                                                                                                                                                    Sequence
AAB11931 standard; protein; 109 AA.
                                                                                                                                                                                                                                         Local Similarity
                                                                                                                       29
                                                                                                                                                                    2 ASELGKSTNTFCKPPC 17
                                                                                                                    aselgkstntffkppc 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alitalo K,
                                                                                                                                                                                                                                                                                                                                            109 AA;
                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0087392.
97AU-0001131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US27373.
                                                                                                                                                                                                                                              80.0%;
93.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stacker SA;
                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                              Score 80; DB 20;
Pred. No. 0.00016;
                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                          DB 20;
                                                                                                                                                                                                                                                                          Length 109;
                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                    0;
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C Crayments thereof, which is specifically reactive with the truncated cumulant vege-b, which is specifically reactive with the truncated cumulan vege-b, and methods of preparing the antibody. The antibody of the cumulant veger-b, and methods of preparing the antibody. The antibody of the cumulant veger-b, and wederes with the binding of veger-b to the veger receptors of these receptors and additionally is not reactive with veger-c. The cumulant veger-b to treat disorders associated with veger-c. The cumulant veger-b compared bility, endothelial cell proliferation, angiogenesis, permeability, endothelial cell proliferation, and endothelial cell cumulantion, especially cancer, diabetic retinopathy, psoriasis, and contropathies. The antibody may also be used to treat fluid accumulation arthropathies. The antibody may also be used to treat fluid accumulation arthropathies. The antibody may also be used to treat fluid accumulation and antibody may also be used to treat fluid accumulation and additionally be used to detect veger-b and may be used to image lymphatic vegeral vegetal v
                                                                                                                                                                                                                                  밁
                                                                                                                              AAW53240
                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           angiogenic disorder; lymphangiogenic disorder; neovascularisation disorder; endothelial cell differentiation disorder; cancer; diabetic retinopathy; psoriasis; arthropathy; pulmonary oedema; cancer; diabetic retinopathy; psoriasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Truncated VEGF-D; vascular endothelial growth factor; human; monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3; vascular permeability disorder; endothelial cell proliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human truncated VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-NOV-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB11931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200037025-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        detection; diagnosis; imaging; lymphatic vasculature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-DEC-1998;
17-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel compositions comprising antibodies reactive to vascular endothelial growth factor-D, useful for treating, e.g. anglogenesis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This sequence represents a 109 amino acid truncated human VEGF-D (vascular endothelial growth factor D), lacking both the N- and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Fig 1; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lymphangiogenesis and neovascularization disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-442498/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
03-AUG-1998
                                                    AAW53240;
                                                                                                      AAW53240 standard; Protein; 325 AA.
                                                                                                                                                                                                                                     29 aselgkstntffkppc 44
                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                          12
                                                                                                                                                                                                                                                                                 2 ASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stacker SA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109 AA;
                                                                                                                                                                                                                                                                                                                                             Conservative
  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0113254.
99US-0134556.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US31332
                                                                                                                                                                                                                                                                                                                                                                   80.0%;
93.8%;
                                                                                                                                                                                                                                                                                                                                                                            Score 80; DB 21;
pred. No. 0.00016;
                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     Length 109;
                                                                                                                                                                                                                                                                                                                                                        0;
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in the lung and/or gaseous exchange between the lungs and the blood permeability in cases of cardiac insufficiency, to improve blood circulation to the heart and O2 gas flow and gaseous exchange in chronic obstructive airway disease, Or to treat malabsorptive syndromes in the intestinal tract. Quantitation of VEGS-D in cancer blopsy specimens may be useful as an indicator of future metastatic risk. Antagonists can be used involving accumulations of fluid in the lung resulting from increases in vascular permeability. The products can also be used
                                                                                                                                                                                                                                                                                                          The sequence is that of human breast vascular endothelial growth factor D (VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis in wound healing, tissue or organ transplantation, or to establish collateral circulation in tissue infarction or arterial stenosis, such as coronary artery disease, and inhibition of angiogenesis in the treatment of cancer or of diabetic retinopathy. It can also be used in the treatment of lung disorders to improve blood circulation in the lung and/or macrois workers between the lung discretization.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 16; Pages 57-58; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated vascular endothelial growth factor-D - used to develop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAV20806.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (LUDW-) LUDWIG INST CANCER RES. (UYHE-) UNIV HELSINKI LICENSING LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transplants; collateral circulation; infarction; arterial stenosis; coronary artery disease; inhibition; cancer; treatment; diabetic retinopathy; lung disorders; blood circulation; gaseous exchange; chronic obstructive airway disease; intestinal malabsorptive syndrome; blopsy; metastatic risk;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-FEB-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           detection; diagnosis; congestive heart failure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vascular endothelial growth factor; VEGF-D; angiogenesis; modification; acceleration; wound healing; tissue; organ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens vascular endothelial growth factor D (VEGF-D).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-179057/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or intestinal disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for use in e.g. modifying angiogenesis or treating lung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alitalo K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97AU-0007435.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96US-0023751
96AU-0003554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97US-0051426
96AU-0001825
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "potential N-linked glycosylation site"
258..260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               156..158
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126..128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stacker SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "potential N-linked glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "potential N-linked glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wilks AF;
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sequence

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CC ameliorate disease and to detect diseases, or susceptibility, by
CC detecting mutations or the presence or amount of anglogenic protein
CC expression. Particularly they are used to stimulate wound healing,
CC growth of damaged bone and tissue, and for repair of vascular tissue,
CC coronary disease. Antagonists of the sequences are used to inhibit
CC angiogenesis in tumours and to treat inflammation (where associated with
CC arthritis or psoriasis. Agonists are also useful for stimulating
CC (lymph)angiogenesis. The proteins are also useful for stimulating
CC (lymph)angiogenesis. The proteins are also useful for stimulating
CC (including agents (potential therapeutic agents) and to raise antibodies.
CC purification and targeting of proteins for in vivo or in vitro diagnosis
CC (including imaging) or for therapy (including when linked to e.g. a label
CC residual disease or haematopoletic progenitor/stem cells. It is also
CC range of other disorders, e.g. autoimmune diseases; allergy; cancer;
CC neurodegeneration, also as chemotactic agents or for stimulating
CC regeneration of the nervous system are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DR
XX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                                   This sequence is vascular endothelial growth factor-D (VEGF-D), which is an angiogenic protein of the invention. The angiogenic proteins and the DNA sequences encoding them, are used to prevent, treat or
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 11; Page 226-227; 244pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acid encoding angiogenic proteins, useful e.g. for promoting healing of wounds and treating peripheral arterial disease, critical limb ischaemia or coronary disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAA91006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; angiogenic protein; wound healing; vascular tissue repair; peripheral arterial disease; critical limb ischaemia; coronary disease; angiogenesis; tumour; inflammation; diabetic retinopathy; psoriasis; rheumatoid arthritis; autoimmune disease; allergy; cancer; therapy; infectious disease; neurodegeneration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-071057/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2000; 2000WO-US14925.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vascular endothelial growth factor-D; VEGF-D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human VEGF-D protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY97572 standard; Protein; 325 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 aselgkstntffkppc 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 ASELGKSTNTFCKPPC 17
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93.8%;
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Pred. No. 0.00047
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Best Local
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                     The present sequence represents a human zvegf2 growth factor encoded by the zvegf2 cDNA which was isolated from a human heart cDNA library zvegf2 protein in a dimeric form acts as a mitogen for fibroblasts or smooth muscle cells zvegf2 is claimed to be useful for stimulating the smooth muscle cells.
                                                                                                                                                                                  New isolated vascular endothelial growth factor - used to develop products for treating e.g. wounds, burns, myocardial infarction, tumours, psoriasis, arthritis, restenosis or organ transplants
                                                                                                                                                                                                                                                                                                                                                                                                                                          18-SEP-1997;
06-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               venous stasis ulce
angiogenic effect;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human zvegf2 growth factor; mitogen; fibroblast;
venous stasis ulcer; diabetic ulcer; skin wound;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human zvegf2 growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW49036 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                 Conklin DC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-JUN-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14
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                                                                                                                                                                                                                                                                                1998-333256/29.
DB; AAV32823.
                                                                                                                                         Pages 53-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                325
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                                                                                                                                                                                                                                                                                                                                                 Gilbert T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ÃĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                          97US-0933455
96US-0759657
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206..2
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109..1
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  of tissue or the re-endothelialisation of vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumour; diabetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . . 294
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 274
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                                                                                                                                  77pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Balbiani ring motif"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Receptor binding domain"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Cysteine-rich domain""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Balbiani ring motif"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Cysteine-rich domain"
                                                                                                                                                                                                                                                                                                                                                 Hart CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    354 AA
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                 Nygaard
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                                                                                                                                                                                                                                                                                                                                                 Sheppard
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       smooth muscle
chemotactic en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               psoriasis;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       le cell;
effect;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-NOV-1996;
05-FEB-1997;
10-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tissue. zvefg2 is particularly claimed to be useful for the treatment of full-thickness skin wounds, including venous stasis ulcers and diabetic ulcers. The zvegf2 protein is also claimed to be useful as an additive in tissue adhesives for promoting revascularisation of the healing tissue. Antagonists against zvegf2 can be used to block its mitogenic, chemotactic and angiogenic effects. The antagonists may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        wascular endothelial growth factor; VEGF-D; angiogenesis; modification; acceleration; wound healing; tissue; organ; transplants; collateral circulation; infarction; arterial stenosis; coronary artery disease; inhibition; cancer; treatment; colonary artery disease; inhibition; cancer; treatment; diabetic retinopathy; lung disorders; blood circulation; gaseous exchange; chronic obstructive aliway disease; intestinal malabsorptive syndrome; blopsy; metastatic risk; intestinal malabsorptive syndrome; blopsy; metastatic risk;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         therefore be useful for reducing growth of solid tumours by inhibiting neovascularisation of the developing tumour or by directly blocking tumour cell growth, in the treatment of diabetic retinopathy, psoriasis,
                                                                                                                                                                                                                                                                                                                                             (LUDW-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-AUG-1998
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                           Claim 16;
                                                                              New isolated vascular endothelial growth factor-D - used to products for use in e.g. modifying anglogenesis or treating heart or intestinal disorders
                                                                                                                                                                                                    N-PSDB; AAV20807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUL-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   detection; diagnosis; congestive heart failure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens vascular endothelial growth factor D (VEGF-D).
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                                                                                                                                                                                                                            1998-179057/16.
                                                                                                                                                                                                                                                                                      MG,
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                                                                                                                                                                                                                                                                                                                                         LUDWIG INST CA
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                        Pages 60-61; 101pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and scleroderma.
                                                                                                                                                                                                                                                                                      Alitalo K,
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96US-0023751
96AU-0003554
96AU-00031097
97AU-0004954
97US-0038814
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93.8%;
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                                                                                                                                                                                                                                                                                      Stacker SA,
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Pred. No. 0.00051;
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                                                                                                                                                                                                                                                                                      Wilks AF;
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Search completed: June 17, 2002, 16:02:12 Job time: 421 sec
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                                                                                                                                                                                                                                                                                                                                                        CC The sequence is that of human lung vascular endothelial growth factor CC (VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis CC in wound healing, tissue or organ transplantation, or to establish CC collateral circulation in tissue infarction or attends; in CC the treatment of cancer or of diabetic retinopathy. It can also be CC used in the treatment of lung disorders to improve blood circulation CC in the lung and/or gaseous exchange between the lungs and the blood CC stream or to improve blood circulation to the heart and O2 gas CC permeability in cases of cardiac insufficiency, to improve blood CC flow and gaseous exchange in chronic obstructive airway disease, CC or to treat malabsorptive syndromes in the intestinal tract. CC Quantitation of VEGF-D in cancer biopsy specimens may be useful CC as an indicator of future metastatic risk. Antagonists can be used CC for treating e.g. conditions such as congestive heart failure, CC increases in vascular permeability. The products can also be used crocked the content of diagnosis.
                                                                                                                                                                                          Query Match 80.0
Best Local Similarity 93.8
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                 for detection and diagnosis.
                                                                                                      354 AA;
                                                                                                                                                                                                                 93.8%;
                                                                                                                                                                                             0;
                                                                                                                                                                                        Score 80; DB 19; Length 354; 
Pred. No. 0.00051; 
0; Mismatches 1; Indels
                                                                                                                                                                                          0;
                                                                                                                                                                                          Gaps
                                                                                                                                                                                          0;
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
  Issued_Patents_AA:*
1: /cgn2_6/ptodata/2,
2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
5: /cgn2_6/ptodata/2,
6: /cgn2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            June 17, 2002, 15:56:36; Search time 75.98 Seconds (without alignments) 5.465 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                            231628 seqs, 24425594 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-761-636A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CASELGKSTNTFCKPPC 17
/cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/pcTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	ω	2	ᆫ	Result No.
43	43	43	43	43	43	43	45	46	47	58	58	58	58	58	58	58	58	58	58	58	59	59	77	77	80	80	Score
43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	46.0	47.0	58.0	58.0	8	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	59.0	59.0	77.0	77.0	80.0	80.0	Query Match Length
104	104	104	104	104	104	83	20	260	120	419	419	419	419	419	419	350	350	350	350	350	418	415	358	321	354	325	
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US-08-875-811-1	US-08-891-848-13	US-08-467-955-2	US-08-467-955-1	US-07-921-619-1	US-08-283-971-1	US-08-875-811-2	US-09-230-222-28	US-09-162-021B-4	US-08-938-975-2	PCT-US96-09001-2	US-08-510-133A-35	US-08-795-430-8	US-09-042-105-18	US-09-042-105-2	US-08-999-811-2	US-08-585-895-33	US-08-510-133A-33	US-09-042-105-4	US-08-824-996-2	US-08-999-811-4	US-08-795-430-13	US-08-795-430-11	US-08-915-795-8	US-08-915-795-9	US-08-915-795-5	US-08-915-795-3	ID
Sequence 1, Appli	Sequence 13, Appl	2,	Sequence 1, Appli	1,	1,	2, 1	28,	Sequence 4, Appli	2,	2, 2	35,	8	18,	2	2, 1	33,	33,	Sequence 4, Appli	2,	Sequence 4, Appli	13,	11,	8	9	Sequence 5, Appli	Sequence 3, Appli	Description

Query Match

Best Local Similarity

80.0%; 93.8%;

Score 80; Pred. No.

DB 4; 8.6e-05;

Length 325;

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
358	355	355	355	355	254	251	129	112	111	107	107	106	105	105	105	104	104
w	ω	w	w	w	ω	ω	ω	ω	w	ω	w	w	ω	ω	ω	4	4
81	US-08-875-811-64	-875-81	US-08-875-811-49	-87	-87	-87	-87	-87	-87	US-08-875-811-30	-87	87	87	87	US-08-875-811-24	US-09-394-268-2	US-09-394-268-1
Sequence !	Sequence (	Sequence !	Sequence '	Sequence '	Sequence (	Sequence !	Sequence (	Sequence 3	Sequence ;	Sequence :	Sequence 2	Sequence 2	Sequence :	Sequence 2	Sequence :	Sequence 2	Sequence
51,	64,	57,	49,	41,	61,	59,	63,	32,	22,	30,	20,	28,	39,	26,	24,	,2	1,
Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	App1	Appl	Appli	Appli

# ALIGNMENTS

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RESULT 1
US-08-915-795-3
US-08-915-795-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/08915795 Patent No. 6235713
                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/915,795
FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: EYANS, JOSEPH D.
RECISTRATION NUMBER: 26,269
RECISTRATION NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEPAX: (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Marc G
                                                                                                                                                                          TELEX: N/A
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                MOLECULE TYPE: protein HYPOTHETICAL: NO ORIGINAL SOURCE: TISSUE TYPE: Human Br
                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Andrew F. WILKS APPLICANT: Steven A. STACKER APPLICANT: Kari ALITALO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: United States of America ZIP: 20005
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CITY: Washington
STATE: DC
                                                                                                   TOPOLOGY: linear
                                                                                                                                      TYPE: amino acid
                                                                                                                                                         LENGTH:
                                                                                                                                                       325 amino acids
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                      Human Breast
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US-08-915-795-9
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; TISSUE TYPE: Human Lung
US-08-915-795-5
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                                             Sequence 9, Application US/08915795
Patent No. 6235713
GENERAL INFORMATION:
APPLIMANT: MAIC G. ACHEN
                                                                                                                                                                                                                                                   Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                Query Match
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INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: MARC G. ACHEN
APPLICANT: ANDREW F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: KALI ALITALO
 APPLICANT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 11
                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                    121 ASELGKSTNTFFKPPC 136
                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 1200 G St
CITY: Washington
STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/915,795 FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                   2 ASELGKSTNTFCKPPC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C
STREET: 1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ASELGKSTNTFCKPPC 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 354 amino acids
             Marc G. ACHEN
Andrew F. WILKS
Steven A. STACKER
Kari ALITALO
                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    United States of America
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                                                                                                                                                                                                                                                                                                                                                                                                                    linear
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                                                                                                                                                                                                                                                                 93.8%;
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Pred. No. 9
                                                                                                                                                                                                                                                   Mismatches
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                                                                                                                                                                                                                                                                                DB 4;
                                                                                                                                                                                                                                                                  .4e-05;
                                                                                                                                                                                                                                                                                Length 354;
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                                                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/08915795 Patent No. 6235713 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                       APPLICANT: MARC G. ACHEN
APPLICANT: ANDREW F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: KAII ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: N/A
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                          SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
ORIGINAL SOURCE:
TISSUE TYPE:
                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 1200
CITY: Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 ASELGKTTNTFFKPPC 136
                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                          STREET: 1200 G S:
CITY: Washington
                                                                                            MEDIUM TYPE:
                                                                                                                                            COUNTRY:
          APPLICATION NUMBER:
                                                                                                                                                                                         ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C. STREET: 1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 ASELGKSTNTFCKPPC 17
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                                                                                                                              20005
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                                                                                                                                            United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : (202) 628-8800
(202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Evenson, McKeown, Edwards & Lenahan P.L.L.C 00 G Street, NW, Suite 700
                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse Lung
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.0%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GROWTH FACTOR
          us/08/915,795
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                                                                                                                                              of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 77; DB 4;
Pred. No. 0.00024;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1064/42983
                                           Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 321;
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Gaps

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ATTORNEY/AGENT INFORMATION: NAME: EVANS, Joseph D.

CEASSIFICATION:

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Patent No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FI96/004
FILING DATE: 01-AUG-1996
PRIOR APPLICATION DATA: 08/671,573
APPLICATION NUMBER: 08/671,573
FILING DATE: 28-JUN-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: (
'SEQUENCE CHARACTERISTICS:
LENGTH: 358 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Alitalo, Kari
APPLICANT: JOUKOV, Vladimir
APPLICANT: JOUKOV, Vladimir
TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
TITLE OF INVENTION: Protein and Gene, Mutants Thereof, and Uses Thereof
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: |
ORIGINAL SOURCE:
TISSUE TYPE: |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 57
                   PRIOR APPLICATION DATA:
                                                                         PRIOR APPLICATION DATA:
                                                                                                                              PRIOR APPLICATION DATA:
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126 ASELGKTTNTFFKPPC 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 6300 S
CITY: Chicago
STATE: Illinoi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: United ZIP: 60606-6402
                                 APPLICATION NUMBER: 08/510,133 FILING DATE: 01-AUG-1995
                                                                                        APPLICATION NUMBER: 08/585,895 FILING DATE: 12-JAN-1996
                                                                                                                                              APPLICATION NUMBER: 08/601,132 FILING DATE: 14-FEB-1996
                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/795,430 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: SII
                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1, Application US/08795430 6130071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Illinois
: United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Marshall, O'Toole, Gerstein, Murray & Borun 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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(202) 628-8844
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87.5%;
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08/340,011
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Pred. No. 0.00027;
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US-08-795-430-13
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                                                                                                                                                                                                              CLASSILIANIA
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: PCT/F196/00427
APPLICATION NUMBER: PCT/F196/00427
FILING DATE: 01-AUG-1996
PRIOR APPLICATION NUMBER: 08/671,573
FILING DATE: 28-JUN-1996
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/601,132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 13, Application US/08795430 Patent No. 6130071
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 59.0%;
Best Local Similarity 71.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                  APPLICATION NUMBER: 08/510,133
FILING DATE: 01-AUG-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/340,011
FILING DATE: 14-NOV-1994
                                                                                                        PRIOK AFFILE.

PAPPLICATION NUMBER: 08/585,895

FILING DATE: 12-JAN-1996

PRIOR APPLICATION DATA: 08/510,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 38,153
REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
ATTORNEY/AGENT INFORMATION: NAME: Gass, David A.
                                                                                                                                                                                      FILING DATE: 14-FEB-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Alitalo, Kari
APPLICANT: Joukov, Vladimir
TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
TITLE OF INVENTION: Protein and Gene, Mutants Thereof, and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Gass, David A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 31.,
TELEFAX: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            139 EFGAATNTFFKPPC 152
                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 ELGKSTNTFCKPPC 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chicago
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         415 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             United States of America
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                                                                                                                                                                                                            14-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-NOV-1994
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Pred. No. 0.
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0.17;
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28967/33691

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; SEQUENCE CHARACTERISTICS:
; LENGTH: 418 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-795-430-13
; MOLECULE TYPE: protein US-08-999 1811-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-999-811-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/08999811 Patent No. 5932540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                  TELEFAX: (202)371-2540
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 350 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 13:
                                                                                                                                                                                                                                                           CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/207,550
FILING DATE: 8-MAR-1994
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 08/465,968
                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                            APPLICATION NUMBER: US 08/465,968
FILING DATE: 06-7UN-1995
ATTORNEY/AGENT INFORMATION:
NAME: MARKOWICZ KAREN R.
REGISTRATION NUMBER: 36,351
REFERENCE/DOCKET NUMBER: 1488.100004
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 38,153
REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR 2 NUMBER OF SEQUENCES: 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142 EFGATTNTFFKPPC 155
                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: HEREW CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 1100 NEW CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: 312/474-0448
                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                             TELEPHONE:
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                                   amino acid
)GY: linear
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                                                                     350 amino acids
                                                                                                                          (202)371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HU, JING-SHAN
ROSEN, CRAIG A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
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                                                                                                                                             (202)371-2600
                                                                                                                                                                                                                                                                                                                                                                                    HEREWITH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LIANG
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71.4%;
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Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application US/09042105 Patent No. 6040157
                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
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Query Match

58.0%;

Score 58;

DB

2;

Length 350;

SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION UMBER: US/09/042,105
FILING DATE: HEREWITH
CLASSIFICATION:

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 8-MAR-1994

PRIOR APPLICATION DATA:
APPLICATION NUMBER:

US 08/465,968

CLASSIFICATION:

CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, KESSLER, CATREET: 1100 NEW YORK AVENUE CITY: WASHINGTON

GOLDSTEIN & FOX

COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk

COUNTRY: UZIP: 20005

STATE:

DC USA

COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS

APPLICANT: HU, JING-SHAN
APPLICANT: ROSEN, CRAIG A.
APPLICANT: CAO, LIANG
TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR 2
NUMBER OF SEQUENCES: 35

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RESULT 8
US-08-824-996-2
                                                                                                                                                                     US-08-824-996-2
                                                                                                                                                                                  SEQ ID NO 2
LENGTH: 350
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/08824996B Patent No. 5935820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 71.4%; Matches 10; Conservative
                                                                       Matches
                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                              FILE REFERENCE: PF112D1
CURRENT APPLICATION NUMBER: US/08/824,996B
CURRENT FILING DATE: 1997-03-27
EARLIER APPLICATION NUMBER: 08/207,550
EARLIER FILING DATE: 1994-03-08
NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Hu, Jing-Shan
APPLICANT: Rosen, Craig A.
APPLICANT: Rosen, Craig A.
APPLICANT: Cao, Liang
TITLE OF INVENTION: Polynucelotides Encoding Vascular Endothelial Growth
TITLE OF INVENTION: Factor 2
                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Ver. 2.0
74 EFGVATNTFFKPPC 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 ELGKSTNTFCKPPC 17
                                 4 ELGKSTNTFCKPPC 17
                                                                       10;
                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 0.2;
1; Mismatches
                                                                                         Score 58; DB 2; Pred. No. 0.2;
                                                                       Mismatches
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                                                                                                           Length 350;
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                                                                     Gaps
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PRIOR APPLICATION DATA:

FALING DATE: 0 CLASSIFICATION:

06-JUN-1995

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US-08-510-133A-33

Sequence 33 Application US/08510133A

; Patent No. 6221839

; GENERAL INFORMATION:
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US-08-510-133A-33
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Best Local Similarity
Matches 10; Conserv
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INFORMATION FOR SEQ ID NO: 4:
                                                                                       TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 33:
SEQUENCE CHARACTERISTICS:
LENGTH: 350 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 36,688
REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)371-2600
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LENGTH: 350 amino acid
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ATTORNEY/AGENT INFORMATION:
NAME: ERIC K, STEFFE
                                                                                                                                                                    APPLICATION NUMBER: US/08/510,133A
FILING DATE: 01-Aug-1995
CLASSIFICATION: CURKNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: Gass, David A.
REGISTRATION UNMBER: 38,153
REFERENCE/DOCKET NUMBER: 28113/32863
TELECHONE: 312/474-6300
TELEPHONE: 312/474-6448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 350 amino acids TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 24-DE
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                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
STREET: 6300 Sears Tower, 233 South Wacker Drive
                                  TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Receptor Ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Alitalo, Kari
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                SEQUENCE DESCRIPTION: SEQ ID NO: 33:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCITY: Chicago
STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
                                                                           TYPE: amino acid
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71.4%;
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Pred. No.
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US-08-999-811-2
Sequence 2, Application US/08999811
Patent No. 5932540
GENERAL INFORMATION:
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Best Local S
Matches 10
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Patent No. 6245530
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
               TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR 2 NUMBER OF SEQUENCES: 15 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
TELEPAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/585,895
                                                             APPLICANT: HU, JING-SHAN APPLICANT: ROSEN, CRAIG APPLICANT: CAO, LIANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Gass, David A.
REGISTRATION NUMBER: 38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
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NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Alitalo, Kari
APPLICANT: Joukov, Vladimir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 350 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: United States of America ZIP: 60606-6402
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CITY: Chicago
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   ADDRESSEE:
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STERNE, KESSLER, GOLDSTEIN & FOX
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                                                                               CRAIG A.
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71.4%;
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1100 NEW YORK AVENUE

8-MAR-1994

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; MOLECULE TYPE: protein US-08-999-811-2
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 419 amino
                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/09042105 Patent No. 6040157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 08/465,968
FILING DATE: 06-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: MARKOWICZ, KAREN R.
REGISTRATION NUMBER: 36,351
REFERENCE/DOCKET NUMBER: 1488.1000004
TELEPHONE: (202,371-2600
                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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APPLICATION NUMBER: US/G
FILING DATE: HERENT"
                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                        MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                         APPLICANT:
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                PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                       STREET: 1100 NEW CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 419 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                              APPLICATION NUMBER: FIRING DATE: HEREW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US (FILING DATE: 8-MAR-1994
                                 CLASSIFICATION:
                                                                                                                                                                             COUNTRY: UZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
   APPLICATION NUMBER:
                                                                                                                                                                                                                                                          ADDRESSEE:
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                                              HEREWITH
                                                                                                                                                                                                                                                                                                                                                      JING-SHAN
                                                                                                                                                                                                                                                                                                                                       CRAIG A.
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71.4%;
                                                                                                                                                                                                                                                                                        VASCULAR ENDOTHELIAL GROWTH FACTOR 2 35
                                                                                                                                                                                                                                                        KESSLER, GOLDSTEIN & FOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Release #1.0, Version #1.30
                                                               US/09/042,105
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US 08/207,550
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Pred. No. 0.
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0.24;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
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Best Local Similarity
Matches 10; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 18, Application US/09042105 Patent No. 6040157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (202)371-254
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-POS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, KESSLER, OSTREET: 1100 NEW YORK AVENUE
                                                                                                                                                                                                                                       SOFTWARE: PatentIn Rel CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
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ATTORNEY/AGENT_INFORMATION:
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APPLICATION NUMBER:
FILING DATE: 06-JUN-
                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/465,968
                                                                                                                                                                          CLASSIFICATION: PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR 2 NUMBER OF SEQUENCES: 35
                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143 EFGVATNTFFKPPC 156
                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: STERNI
STREET: 1100 NEW
CITY: WASHINGTON
                                                            FILING DATE: (CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 36, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 24-DEC
           APPLICATION NUMBER: TO BE ASSIGNED FILING DATE: 24-DEC-1997
                                                                                                                             CLASSIFICATION:
                                                                                                                                          FILING DATE:
                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: HEREW
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                                                                                                                                                           APPLICATION NUMBER:
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                      USA
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                                                                                                                                            8-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-DEC-1997
                                                                            06-JUN-1995
                                                                                                                                                                                                           HEREWITH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58.0%;
71.4%;
                                                                                                                                                                                                                                                                         PC-DOS/MS-DOS
                                                                                                                                                                                                                                                      Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 08/465,968
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                                                                                                                                                            us 08/207,550
                                                                                                                                                                                                                          US/09/042,105
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                                                                                                                                                                                                                                                                                                                                                                                                                   GOLDSTEIN & FOX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 419;
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                                                                                                                                                                                                                        FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FI96/00427
FILING DATE: 01-AUG-1996
PRIOR APPLICATION NUMBER: 08/671,573
FILING DATE: 28-JUN-1996
PRIOR APPLICATION UNMBER: 08/601,132
APPLICATION NUMBER: 08/601,132
APPLICATION NUMBER: 08/601,132
APPLICATION NUMBER: 08/601,132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-795-430-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/08795430 Patent No. 6130071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (202)371-2540 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANY: Alitalo, Kari
APPLICANY: Joukov, Vladimir
TITLE OF INVENTION: Vascular Endothelial Growth Factor C (VEGF-C)
TITLE OF INVENTION: Protein and Gene, Mutants Thereof, and Uses T
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 419 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAtentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/795,430
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 36,688
REFERENCE/DOCKET NUMBER: 114
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun STREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: ERIC K. STEFFE
                                                         APPLICATION NUMBER: 08/510,133
FILING DATE: 01-AUG-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/340,011
FILING DATE: 14-NOV-1994
                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/585,895
FILING DATE: 12-JAN-1996
                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                    PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Chicago
NAME: Gass, David A. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 ELGKSTNTFCKPPC 17
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Pred. No. 0.24;
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; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-795-430-8
                                                                                                        δÃ
Search completed: June 17, 2002, 15:56:37 Job time: 86 sec
                                                                             DЬ
                                                                                                                                     Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                        TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS: LENGTH: 419 amino acids
                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 28967/33691
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
TELEPAX: 312/474-0448
                                                                           amino acid
                                                                                                                                        Conservative
                                                                                                                                                       58.0%;
71.4%;
                                                                                                                                                                                                                                                                                                             8:
                                                                                                                                                       Score 58; DB 4; Length 419; Pred. No. 0.24;
                                                                                                                                        Mismatches
                                                                                                                                        Indels
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Gaps

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

Run on: June 17, 2002, 15:58:22; Search time 95.43 Seconds (without alignments) 9.062 Million cell updates/sec

Title: Perfect score: Sequence: US-09-761-636A-9 55 1 CCNEESLIC 9

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched:

283138 seqs, 96089334 residues 283138

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR\_71:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	ω	2	1	Result No.
35	36	36	36	36	36	36	36	36	36	37	37	37	37	37	37	37	39	39	40	41		42	42	42	45	45	45	45	Score
63.6	-	65.5	5	Ģ	ŗ	.5	5	5		7	.7	67.3	7.	67.3		•	70.9	•	•	74.5	74.5	76.4	76.4	76.4	81.8	81.8	Ë	81.8	Query Match I
128	3655	1115	818	328	261	149	101	74	73	166	166	164	147	144	107	92	419	162	82	232	190	214	190	190	190	146	133	120	Length I
	رد د																											2 A3	DB ID
151295	T38084	A45761	F96586	AB0021	D90123	A41236	S07514	G85358	F85358	NVPG2	NVBO2	NVHU2	NVSH2	A29101	NVWH2F	NFHO2	S69207	T01973	E36787	A41551	S52130	A44881	A35987	B44881	B40080	S57956	49530	33787	0
vascul	TRAP-]	Ca2+-t	hypoth	LacI-f	hypoth	placental	gene 5.3	stress	hypoth	vasopressin	vasopressin	vasopressin	vasopressin	vasopressin	vasopressin	neurophysin	vascul	hypoth	hypoth	vascular	vascular	vascular	glioma	vascular	vascular	ovine	vascular	vascular	Description
vascular endotheli	TRAP-like protein	Ca2+-transporting	hypothetical prote	LacI-family transc	hypothetical prote	ital growth f	6.3 protein -		hypothetical prote	essin / neur	hysin 2 - ho	vascular endotheli	hypothetical prote	hypothetical prote	ar endotheli	ar endotheli	ar endotheli	glioma-derived vas	ar endotheli	ar endotheli	ovine vascular end	ar endotheli	ar endotheli	ption					

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1 CCNEESLIC 9

45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30
34	34	34	34	34	34.5	34.5	35	35	35	35	35	35	35	35	35
61.8	61.8	61.8	61.8	61.8	62.7	62.7	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	
196	196	196	166	129	1778	351	4427	1058	1058	477	416	354	228	158	148
2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2
A48851	B28964	A37359	JN0248	AD0255	T50074	T42421	PN0637	A38564	JC1254	S53362	G86232	S59521	T39386	A56125	D49530
platelet-derived.g	. platelet-derived g	platelet-derived g	platelet-derived g	probable phage ant	probable nucleopor	hypothetical prote	polyketide synthas	ubiquitinprotein	ubiquitinprotein	mucin 5AC (clone J	cysteine proteinas	mucin 5ac - mouse	probable G1-S-spec	placental growth f	16K vascular endot

# ALIGNMENTS

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A;Residues: 27-31 <FER>
C;Keywords: alternative splicing; glycoprotein
F;1-26/Domain: signal sequence #status predicted <SIG>
F;27-190/Product: vascular endothelial growth factor #status predicted
F;100/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                       R; Ferrara, N.; Henzel, W.J.
Blochem. Blophys. Res. Commun. 161, 851-858, 1989
A; Title: Pituitary follicular cells secrete a nove
A; Reference number: A33255; MUID:89286596
A; Accession: A33255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: mRNA
A;Residues: 27-190 <TIS>
A;Cross-references: GB:M31836; NID:g163808; PIDN:AAA30804.1; PID:g163809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:M32976; NID:g163006; PIDN:AAA30502.1; PID:g163007 R;Tischer, E.; Gospodarowicz, D.; Mitchell, R.; Silva, M.; Schilling, J.; Lau, K.; Biochem. Biophys. Res. Commun. 165, 1198-1206, 1989 A;Title: Vascular endothelial growth factor: a new member of the platelet-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: A40080; MUID:90069608 A; Accession: B40080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Leung, D.W.; Cachianes, G.; Kuang, W.J.; (Science 246, 1306-1309, 1989)
A;Title: Vascular endothelial growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vascular endothelial growth factor precursor (version 2) - bovine C;Species: Bos primigenius taurus (cattle) C;Date: 30-Uun-1992 #sequence_revision 30-Jun-1992 #text_change 05-Nov-1999 C;Accession: B40080; B33787; A33255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ovine vascular endothelial growth factor - sheep (forestic sheep) (species: Ovis orientalis aries, Ovis ammon aries (domestic sheep) (c;Date: 13-Jan-1996 #sequence_revision 01-Mar-1996 #text_change 05-Nov-1999 (c;Accession: S57956 R;Redmer, D.A.; Dai, Y.; Li, J.; Jones, S.C.; Moor, R.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Reference number: A33787; MUID:90121225
A;Accession: B33787
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A; Residues: 1-146 < RED>
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Matches 7
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mes 7; Conserv
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                                                          CCNDESLEC 93
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                                                                                                                                                                        81.8%;
77.8%;
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77.8%;
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Pred. No.
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                                                                                                                                                     Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             growth
                          RESULT
A44881
vascular endothelial growth factor-3 precursor -
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R;Conn, G.; Bayne, M.L.; Soderman, D.D.; Kwok, P.W.; Sullivan, K.A.; Palisi, ? Proc. Natl. Acad. Sci. U.S.A. 87, 2628-2632, 1990
A;Title: Amino acid and cDNA sequences of a vascular endothelial cell mitogen A;Reference number: A35987; MUID:90207249
A;Accession: A35987
    밁
                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                glioma-derived vascular endothelial cell growth factor - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 16-Nov-1990 #sequence_revision 16-Nov-1990 #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
A35987
                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-190 < CON>
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A;Accession: A61029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-116, 'ER',119-190 <CLA>
A; Cross-references: GB:M95200; NID:g202350; PIDN:AAA40547.1;
A; Note: sequence extracted from NCBI backbone (NCBIN:110665,
A; R; Rosenthal, R.A.; Megyesi, J.F.; Henzel, W.J.; Ferrara, N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A:Experimental source: embryo
A:Note: sequence extracted from NCBI backbone (NCBIN:107622,
R;Claffey, K.P.; Wilkison, W.O.; Spiegelman, B.M.
J. Biol. Chem. 267, 16317-16322, 1992
A:Title: Vascular endochhelial growth factor. Regulation by ce A:Reference number: A43351; MUID:92355593
A:Accession: A43351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 05-Nov-1999
C;Accession: B44881; A43351; A61029
R;Breier, G.; Albrecht, U.; Sterrer, S.; Risau, W.
                                                                                                                                                                                       A;Cross-references: GB:M32167; NID:g204287; PIDN:AAA41211.1; PID:g204288
                                                                                                                                                                                                                                                     A; Status: preliminary
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A; Residues: 1-190 <BRE>
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A:Title: Expression of vascular endothelial growth factor during embryonic angioge
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Best Local
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66.78;
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66
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Pred. No.
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Pred. No.
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NCBIP: 110675)
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mouse

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A; Accession: A44881
A; Accession: A44881
A; Residues: 1-214 < GRE>
A; Cross-references: GB:S37052; NID:g249856; PIDN:AAB22252.1; PID:g249857
A; Cross-references: GB:S37052; NID:g249856; PIDN:AAB22252.1; PID:g249857
A; Cross-references: GB:S37052; NID:g249856; PIDN:AAB22252.1; PID:g249857
A; Mote: sequence extracted from NCBI backbone (NCBIN:104677, NCBIP:104678)
A; Accession: C44881
A; Accession: C44881
A; Residues: 1-140,209-214 < GR2>
A; Cross-references: GB:S38100; NID:g249860; PIDN:AAB22254.1; PID:g249861
A; Rote: sequence extracted from NCBI backbone (NCBIN:107624, NCBIP:107625)
A; Clouss, M.; Gerlach, M.; Gerlach, H.; Brett, J.; Wang, F.; Familletti, P.C.; Pan, Y.C.
J. Exp. Med. 172, 1535-1545, 1990
A; Title: Vascular permeability factor: a tumor-derived polypeptide that induces endothel A; Accession: A60932; MUID:91079755
A; Accession: A60932; MUID:91079755
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A; Residues: 27-33 CCLA>
R; Residues: 27-33 CCLA>
R; Sugihara, T.; Kaul, S.C.; Mitsui, Y.; Wadhwa, R.
Biochim, Biophys. Acta 1224, 365-370, 1994
A; Title: Enhanced expression of multiple forms of VEGF
A; Reference number: S52136; MUID:95101726
A; Accession: S52136
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A;Title: Expression of vascular endothelial growth factor during embryonic angiogenesis A;Reference number: A44881; MUID:92274860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Comment: Homodimers could be demonstrated for recombinant VEGF-2 but not VEGF-3. C;Keywords: alternative splicing; anglogenesis; disulfide bond; glycoprotein; homodimer; E;1-26/Domain: signal sequence #status predicted <SIG> F;27-214/Product: vascular endothelial growth factor-3 #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                        R;Sharma, H.S.; Tang, Z.H.; Gho, B.C.G.; Verdouw, P.D. Blochim. Biophys. Acta 1260, 235-238, 1995 A;Title: Nucleotide sequence and expression of the porcine vascular endothelial growth A;Reference number: S52130; MUID:95143284 A;Accession: S52130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vascular endothelial growth factor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 14-Jul-1995 #sequence_revision 21-Jul-1995 #text_change 05-Nov-1999
C;Accession: S52130
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A; Residues: 1-190 <SHA>
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CCNDEGLEC 93
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Sterrer, S.; Risau, W.
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Pred. No.
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            A; Experimental source: AIDS-Kaposi's
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R;Tischer, E.; Mitchell, R.; Hartman, T.; Silva, M.; Gospodarowicz, D.; Fiddes, J. J. Biol. Chem. 266, 11947-11954, 1991
A;Title: The human gene for vascular endothelial growth factor. Multiple protein in A;Reference number: A40454; MUID:91268072
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C;Species: Homo sapiens (man)
C;Date: 28-Aug-1992 #sequence_revision 28-Aug-1992 #text_change 05-Nov-1999
C;Accession: A41551; C41551; B41551; A40454; B40454; C40454; A40079; A40080; JQ146
R;Houck, K.A.; Ferrara, N.; Winer, J.; Cachianes, G.; Li, B.; Leung, D.W.
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A;Title: The vascular endothelial growth factor family: identification of a fourth
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A;Molecule type: DNA
A;Residues: 1-165,183-232 <TII>
A;Cross-references: GB:M63971; GB:M63972; GB:M63973;
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A; Residues: 1-141, 227-232 <HOU>
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A; Residues: 1-140,'N',183-232 <HOU2>
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A;Accession: A40080
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Title: Vascular permeability factor, an endothelial cell mitogen related to PDG: A; Reference number: A40079; MUID:90069609
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A; Residues: 1-141,227-232 <TI3>
A; Cross-references: GB:M63971; GB:M63972; GB:M63973; GB:M63974; GB:M63975;
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A; Residues: 1-140,'N
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                                                                                                                                                                                                                                                                                                        R;Weindel, K.; Marme, D.; Weich, H.A.
Biochem. Biophys. Res. Commun. 183, 1167-1174, 1992
A;Title: AIDS-associated Kaposi's sarcoma cells in culture
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A; Residues: 1-140,'N',183-232 <LEU>
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A; Residues: 1-165,183-232 <KEC>
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A; Molecule type: mRNA
A; Residues: 1-140,'N',
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A; Residues: 1-140,'N',183-232 <WEI>
A; Cross-references: EMBL:X62568; NID:g37658;
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                                                                                               A; Experimental source: AIDS-Kaposi's
                                                                      JQ146
   -140, 'N', 227-232 <WE2>
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sarcoma cell

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hypothetical protein T9A4.2 - Arabidopsis thaliana N; Alternate names: hypothetical protein F2AG24.40 C; Species: Arabidopsis thaliana (mouse-ear cress) C; Date: 26-Feb-1999 #sequence_revision 26-Feb-1999 C; Accession: TG1973; T04039
                                                                                                                         RESULT
T01973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Gene: GDB:VEGF
A;Cross-references: GDB:132244; OMIM:192240
A;Map position: 6p21-6p12
C;Function:
A;Description: promotes fluid and protein leakage from blood vessels
C;Keywords: alternative splicing; anglogenessis; dimer; disulfide bond; extracellular procedure; vascular endothelial growth factor 206 precursor #status predicted <v22(E;1-165,183-232/Product: vascular endothelial growth factor 129 precursor #status predict;1-141,227-232/Product: vascular endothelial growth factor 121 precursor #status predicted.
F;1-26/Domain: Signal sequence #status predicted <SIG>
F;101/Binding site: carbohydrate (Asn) (covalent) #status predicted
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C;Keywords:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;TITLE: Channel cattish virus: a new type of herpesvirus A;Reference number: A39447; MUID:92087490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Title: Channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:M75136; NID:g331209; PIDN:AAA88116.1; PID:g331223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-82 <DAV>
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A; Accession: E36787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Davison, A.J.
submitted to GenBank, January 1992
A;Description: Channel catfish virus: a new type of herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Note: host Ictalurus punctatus (channel catfish)
C; Date: 17-Aug-1992 #sequence_revision 17-Aug-1992 #text_change 08-Oct-1999
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E36787
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A;Accession: A34492
A;Molecule type: protein
A;Residues: 27-36;43-49,'R';72-76,'Q',78-81;59-71 <CON>
C;Comment: The most common of several alternatively spliced forms is VE C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Davison,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Species: ictalurid herpesvirus 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical protein ORF13 - ictalurid herpesvirus 1 (strain auburn 1)
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A;Title: Human vascular permeability factor. Isolation from U937 cells.
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Best Local :
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nes 6; Conserv
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6; Conser
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66.7%;
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Pred. No. 7.1;
1; Mismatches
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Pred. No.
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                   #text_change 14-May-1999
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R;Lee, J.; Gray, A.; Yuan, J.; Luoh, S.M.; Avrahasubmitted to the EMBL Data Library, December 1995 A;Description: Vascular endothelial growth factor
                                                                                                                                                                                                                                                                                                                                    A;Status: nucleic acid sequence not shown; not compared with conceptual translation A;Molecule type: mRNA A;Residues: 70-419 <JOUI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:X94216; NID:g1177488; PIDN:CAA63907.1; PID:e221096; PID:g A;Note: the nucleotide sequence was submitted to the EMBL Data Library, December 1: A;Note: only a part of the translation is shown
A;Note: this is a revision to the sequence from reference S61795
B;JOUKOV, V.; Pajusola, K.; Kaipainen, A.; Chilov, D.; Lahtinen, I.; Kukk, E.; Sak
A;Cross-references: EMBL:U43142; NID:g1150988; PIDN:AAA85214.1; PID:g1150989
                                     A; Molecule type: mRNA
A; Residues: 1-419 <LEE>
                                                                                            A; Reference number: S69208
A; Accession: S69208
                                                                                                                                                                                                                       A; Molecule type: protein
A; Residues: 'X', 104-120 <JOU2>
                                                                                                                                                                                                                                                                                 A;Note: this sequence has been revised in reference S69207 A;Accession: S71443
                                                                                                                                                                                                                                                                                                                                                                                                                           A;Title: A novel vascular endothelial growth factor, VEGF-C, is a ligand for the F. A;Reference number: S61795; MUID:96178224
A;Accession: S61795
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EMBO J. 15, 290-298, 1996
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A; Residues: 1-419 < JOU>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Homo sapiens (man)
C;Date: 27-Apr-1996  #sequence_revision 01-Nov-1996  #text_change 08-Oct-1999
C;Accession: S69207; S61795; S71443; S69208; G02659
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A; Residues: 1-162 <BEV>
A; Cross-references: EMBL: AL049488
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A;Experimental source: cultivar Columbia
R;Bevan, M.; Murphy, G.; Ridley, P.; Hudson, S.; Bancroft, I.
submitted to the Protein Sequence Database, March 1999
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A; Accession: T04039
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A; Residues: 1-162 <ZID>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Note: T9A4.2; F24G24.40
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Pred. No. 17;
                                                                                                                                                                                                S.M.; Avraham, H.; Wood, W.I.
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                                                                                                                                          protein (VRP): A ligand
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J.C.

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A;Molecule type: protein
A;Residues: 1-9 <ACH2
R;Chauvet, M.T.; Codogno, P.; Chauvet, J.; Acher, R.
FEBS Lett. 88, 91-93, 1978
A;Title: Phylogeny of neurophysins. Complete amino acid sequence of whale (Balaenoptera A;Reference number: A91447; MUID:78148313
A;Accession: A91447
                                                                                                                                                                                                                                 R;Acher, R.; Chauvet, J.; Chauvet, M.T.

Nature 201, 191-192, 1964
A;Title: Isolation of finback whale oxytocin and vasopressin.
A;Reference number: A93147
A;Accession: B93147
                                                                                                                                                                                                                                                                                                                                                   N;Contains: Arg-vasopressin; neurophysin 2
C;Species: Balaenoptera physalus (finback whale, common rorqual)
C;Date: 18-Aug-1982 #sequence_revision 05-Jan-1996 #text_change 31-Mar-2000
C;Accession: B93147; A91447; A01446
       A; Molecule type: protein A; Residues: 13-107 < CHA> A; Note: some residues may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Superfamily: oxytocin-neurophysin
C;Keywords: hormone; hypothalamus
F;7-51,10-24,18-41,25-31,58-70,64-82,71-76/Disulfide bonds: #status predicted
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A;Cross references: GDB:3890883; OMIM:601528
F;1-12/Domain: signal sequence #status predicted <SIG>
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A;Reference number: H01557
A;Accession: G02659
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A; Residues: 1-419 < MOR>
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. 36;
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only by homology with other neurophysins
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Matches
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ein for vasopressin
C;Superfamily: oxytocin-neurophysin
C;Keywords: amidated carboxyl end; glycoprotein; hormone;
F;1-9/Product: Arg-vasopressin #status experimental <VAS>
F;13-107/Product: neurophysin 2 #status experimental <NF2>
                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: protein
A; Residues: 13-105 <CH2>
A; Note: 93-Ala was also found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: protein
A;Residues: 13-144 <CH4>
R;Chauvet, M.T.; Chauvet, J.; Acher, R.
Int. J. Pept. Protein Res. 30, 676-682, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Cavia porcellus (guinea pig)
C;Date: 15-Dec-1988 #sequence_revision 15-Dec-1988 #text_change 06-Sep-1996
C;Accession: A29101; S00009; JS0300; A23630
                                                                                                                                                                                                                                                                                                 A; Molecule type: protein A; Residues: 107-144 < CH3>
                                                                                                                                                                                                                                                                                                                                             A; Accession: A23630
                                                                                                                                                                                                                                                                                                                                                               A; Title: Guinea pig copeptin. The glycopeptide domain of the vasopressin precursor A; Reference number: A23630; MUID: 86136563
                                                                                                                                                                                                                                                                                                                                                                                                     R;Chauvet, M.T.; Chauvet, J.; FEBS Lett. 197, 169-172, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: JS0300; MUID:88138574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Title: Guinea pig MSEL-neurophysin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Conformation limited proteolysis A; Reference number: S00009; MUID:87247214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; Chauvet, J.; Chauvet, M.T.; Acher, FEBS Lett. 217, 180-183, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: protein A; Residues: 1-144 < CHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: Guinea pig neurohypophysial hormones. A;Reference number: A29101; MUID:87105929 A;Accession: A29101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R; Chauvet, M.T.; Rouille, Y
FEBS Lett. 210, 40-44, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vasopressin / neurophysin 2 precursor - guinea pig
N;Alternate names: copeptin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Description: vasopressin is a hypothalmic peptide hormone that is an antidiuret
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C; Function:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: S00009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N;Contains: Arg-vasopressin; neurophysin 2; pituitary glycopeptide
                                            Query Match
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  Similarity 5; Conserv
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62.5%;
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62.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                              Acher,
Score 37; DB
Pred. No. 34;
2; Mismatches
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Search completed: June 17, 2002, 15:58:23 Job time: 192 sec

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OM protein - protein search, using sw model
                                                                            GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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June 17, 2002, 16:24:28; Search time 44.84 Seconds (without alignments) 7.772 Million cell updates/sec

Title: Perfect score: Sequence: US-09-761-636A-9

Run on:

1 CCNEESLIC 9

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 105224 seqs, 38719550 residues

Total number of hits satisfying chosen parameters: 105224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt\_40:\*

Database :

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

33 32	31 31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	6	ر.	4	ω	N	1	No.	Result
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70 4	Q10064 schizosacch	ر د	0	Ģ	meso	sus	P01180 bos taurus	P01185 homo sapien	OVis	9	4	P01182 equus cabal	Q9xs47 bos taurus	P49767 homo sapien	P97953 mus musculu	035757 rattus norv		homo s	Q9myv3 canis famil	sus so	Q9gkr0 equus cabal	P16612 rattus norv	Q00731 mus musculu	P97946 mus musculu	bos ta	P26617 cavia porce	P50412 ovis aries	4 orf	035251 rattus norv	O43915 homo sapien	Description	

# ALIGNMENTS

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Alitalo K., Achen M.G.;  **Biosynthesis of vascular endothelial growth factor-D involves proteolytic processing which generates non-covalent homodimers.";  J. Biol. Chem. 274.32127-32136(1999).  -!- FUNCTION: Growth factor active in angiogenesis, lymphangiogenesis and endothelial cell growth, stimulating their proliferation and migration and also has effects on the permeability of blood vessels. May function in the formation of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Binds and activates VEGFR-2 (FIkl) and VEGFR-3 (FIt4) receptors.  -!- SUBUNIT: Homodimer; non-covalent and antiparallel.	=9811 .G., K., ar er = kir atl. atl. 1NG, ING, ING, S.A.	SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  TISSUB-Lung;  MEDLINE-97349118; PubMed-9205122;  MEDLINE-97349118; PubMed-9205122;  Yamada Y., Nezu JI., Shimane M., Hirata Y.;  Yamada Y., Nezu JI., Shimane M., Hirata Y.;  "Molecular cloning of a novel vascular endothelial growth factor,  VEGF-D.";  Genomics 42:483-488(1997).  SEQUENCE FROM N.A.  TISSUB-Lung;  MEDLINE-98140120; PubMed-9479493;  MEDLINE-98140120; PubMed-9479493;  Roschigiani M., Lestingi M., Luddi A., Orlandini M., Franco B.,  Roschigiani M., Lestingi M., Diviero S.;  "Human FIGF: cloning, gene structure, and mapping to chromosome Xp22.1  between the PIGA and the GRPR genes.";  Genomics 47:207-216(1998).	D_HUMAN VEGD_HUMAN STANDARD; PRT; 354 AA. 043915; 01-MAR-2002 (Rel. 41, Created) 01-MAR-2002 (Rel. 41, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation update) 01-MAR-2002 (Rel. 41, Last annotation update) Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced growth factor) (FIGF). FIGF OR VEGFD. Homo sapiens (Human). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID=9006;

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                       VEGD_RAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROPEP
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L; Y12863; CAA73370.1; -.
L; Y12865; CAA73371.1; -.
L; Y12865; CAA73371.1; JOINED.
L; Y12866; CAA73371.1; JOINED.
L; Y12866; CAA73371.1; JOINED.
L; Y12869; CAA73371.1; JOINED.
L; Y12869; CAA73371.1; JOINED.
L; Y12870; CAA73371.1; JOINED.
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L; Y12870; CAA73371.1; JOINED.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Highly expressed in lung, intestine and fetal lung, and at lower levels
                                                                                                             CCNEESLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; P15692; 1VPP.
rPro; IPR000072;
; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             colon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AJ000185; CAA03942.1;
                                                                                                                                                                                                        Similarity 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PS00249; PDGF_1; 1.
PS50278; PDGF_2; 1.
Growth factor; Glycoprotein; Signal; Repeat; Growth factor; Glycoprotein; Signal; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and pancreas.
                                                                                                                                                                                                     Conservative
  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PDGF; 1.
                                                                                                                                                                                                                                                                                                                                        237
273
293
318
153
189
191
136
145
185
287
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88
205
354
318
                                                                                                                                                                                                                                                                                                                   40444
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                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
2048D769D735173E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                             INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
OR 99 (IN A MINOR FORM).
VASCULAR ENDOTHELIAL GROWTH FACTOR
                                                                                                                                                                                                                          Score 55;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 X 16 AA REPEATS
X(1,3)-C.
PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (APPROXIMATE).
                                                                                                                                                                                                   Mismatches
326
                                                                                                                                                                                                                      0.013;
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Ā
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                                                                                                                                                                                                                                        Length 354;
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SETERE TERESTER TO SERVICE TO SER
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CARBOHYD
                                                                                        DISULFID
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REPEAT
                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                              riam; Pro0341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS00278; PDGF_2; 1.
Mitogen: Growth factor.
                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                          Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                  Mitogen; Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF014827; AAB66557.1;
HSSP; P15692; IVPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute. There are no restuse by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                               PROPEP
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Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat)
Eukaryota; Metazoa; Cho
Mammalia; Eutheria; Rod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2002 (Rel. 41, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor D precurso
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  growth factor) (FIGF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FIGF OR VEGFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               035251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                          Growth factor; Gi
on pair of basic
      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PDGF;
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278
298
317
158
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196
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93
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      growth factor D precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                Glycoprotein; Signal;
      MW.
                                                                                                                                                                                                                                                                                                                                                                                      residues; Multigene POTENTIAL.
4 (INCOMPLETE).

INTRACHAIN (BY SIMILARITY).

INTRACHAIN (BY SIMILARITY).

INTRACHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

INTERCHAIN (BY SIMILARITY).

N-LINKED (GLCNAC...) (POTENTIAL).

N-LINKED (GLCNAC...) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                        POTENTIAL.
                                                                                                                                                                                                                                                                                                                                            VASCULAR ENDOTHELIAL GROWTH FACTOR D.
                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; I
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                X 16 AA REPEATS OF (1,3)-C.
                                                                                                                                                                                                                                                            (APPROXIMATE).
                                                                                                                                                                                                                                                                                                                                                                                                          family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
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Query Match

89.18;

Score

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ALD DESCRIPTION OF THE PROPERTY OF THE PROPERT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VEGH_ORFN2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
RESULT 4
VEGA_SHEEP
ID VEGA_SHEEP
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                                                                                                                                                                δÃ
                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                           Query Match
Best Local
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DISULFID
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DISULFID
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
16-OCT-2091 (Rel. 40, Last annotation update)
Vascular endothelial growth factor homolog precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGE; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Orf virus (strain NZ2) (OV Viruses; dsDNA viruses, no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VEGH_ORFN2
P52584;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Growth factor; Glycoprotein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; S67520; AAB29220.2; -. HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      poxvirus orf virus.";
J. Virol. 68:84-92(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viruses; dsDNA viruses, 
Parapoxvirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SUBUNIT: HOMODIMER; DISULFIDE-LINKED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lyttle D.J., Fraser K.M., Fleming S.B., Mercer A.A., "Homologs of vascular endothelial growth factor are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=94076465; PubMed=8254780;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000072; PDGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10259;
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       STANDARD;
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77.8%;
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RNA stage;
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2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                HOMOLOG.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                           Score
Pred.
                                                                                                                                                                                                                                                                                                                                      INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC...) (POTENTIAL).
; 917C0F6883030C39 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VASCULAR ENDOTHELIAL GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL
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       PRT;
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No.
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       146
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encoded by the
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RESULT 5
VEGA_CAVPO
                                                                                B
                                                                                                                                             Query Match
Best Local
                                                                                                                                 Matches
                                                                                                                                                                                                                                                    DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ovis aries (Sheep).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A) (Vascular permeability factor) (VPF).
                                                                                                                                                                                                                           DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00249; PDGF_1; 1.

PROSITE; PS50278; PDGF_2; 1.

Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal; Heparin-binding; Multigene family.

SIGNAL 1 26 BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Redmer D.A., Dai Y., Li J., Charnock-Jones D.S., Smith S.K., Reynolds L.P., Moor R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bovidae; Caprinae; Ovis.
NCBI_TaxID=9940;
VEGA_CAVPO P26617;
                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X89506; CAA61677.1; HSSP; P15692; 1VPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=97117958; PubMed=8958842;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VEGF OR VEGFA.
                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -i- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Characterization and expression of vascular endothelial growth
                                                                                85 CCNDESLEC 93
                                                                                            1 CCNEESLIC 9
                                                                                                                               Similarity
7; Conserv
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                                                                                                                                  Conservative
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              STANDARD;
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17247 MW;
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Cetartiodactyla; Ruminantia; Pecora;
                                                                                                                                             81.8%;
77.8%;
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Pred. No. 0.32
1; Mismatches
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INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BC SIMILARITY).
V-LINKED (GLCNAC. . ) (POT
4E792CB557F91760 CRC64;
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BY SIMILARITY.
BY SIMILARITY.
              PRT;
              164 AA
                                                                                                                                        DB 1
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RESULT
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Best Local
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                                                     VEGF
                                                            01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precurso
permeability factor) (VPF).
                                                                                                                                                                                   BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00141; PDGF; 1.

SMART; SM00141; PDGF; 1.

PROSITE; PS00249; PDGF_1; 1

PROSITE; PS50278
                                                                                                                                    P15691;
01-APR-1990
                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
CARBOHYD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mitogen;
DISULFID
                     Bos taurus (Bovine).
Eukaryota; Metazoa;
      Mammalia; •Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M84230;
HSSP; P15692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A (VEGF-A) (Vascular permeability
                                                                                                                                                                    /EGA_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JAN-1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                   59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: Secreted but to the extracellular matrix unless
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       permeability (By similarity).
SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
                                                                                                                                                                                                                                                                            CCNEESLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: Growth
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                                                       OR VEGFA.
                                                                                                                                                                                                                                                   CCNDESLEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OR VEGFA.
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                                                                                                                                                                                                                                                                                                                                                                                                          2; PS00249; PDGF_1; 1.
2; PS50278; PDGF_2; 1.
1; Angiogenesis; Growth f
D 25 67 By
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D 50 50 IN
D 59 59 IN
D 59 59 IN
D 74 74 N-
                                                                                                                                                                                                                                                                                                               Similarity
7; Conser
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1VGH.
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                                                                                                                                                                    STANDARD;
   Chordata; Crania:
Cetartiodactyla;
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77.8%;
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   Craniata; Vertebrata;
actyla; Ruminantia; Pec
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                                                                                   A precursor
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   Pecora;
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                  Euteleostomi;
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                                                                                  (Vascular
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SETERE TO THE TWO DESCRIPTION OF THE PROPERTY 
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                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                         InterPro; IPR000072;
Pfam; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                         PIR; A33255; A33255. PIR; A33787; A33787.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -i- FUNCT
                                                                                                                                                                                                                                                                                                         HSSP; P15692; 1VGH
                                                                                                                                                                                                                                                                                                                        PIR; B40080; B40080.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                similarity).
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Pfam; pF00341; pDGF; 1.
ProDom; pD001629; pDGF; 1.
SMART; SM00141; pDGF; 1.
SPROSITE; PS00249; pDGF_1; 1.
PROSITE; PS00249; pDGF_2; 1.
Mitogen; Angiogenesis; Growth factor; Glycoprotein; Signal; Mitogen; Angiogenesis; Browth factor; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; M32976; AAA30502.1; -. EMBL; M31836; AAA30804.1; -. EMBL; M33750; AAA30805.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ferrara N., Henzel W.J.; "Pituitary follicular cells secrete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    factor specific for vascular endothelial cells." Biochem. Biophys. Res. Commun. 161:851-858(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A., AND SEQUENCE OF 27-47.
MEDLINE-90069608; PubMed-2479986;
Leung D.W., Cachianes G., Kuang W.-J., Goeddel D.V., Ferrara N.;
"Vascular endothelial growth factor is a secreted angiogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-89286596; PubMed-2735925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 derived growth factor gene family.";
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"Vascular endothelial growth factor: a new member of the platelet-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Science 246:1306-1309(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             produced by alternative splicing. SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Them. Biophys. Res. Commun. 161:851-858(1989). FUNCTION: Growth factor active in angiogenesis, vasculogenesis endothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFR1/Fit-1 and VEGFR2/Kdr receptors and to heparan sulfate and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       heparin (By similarity). SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALTERNATIVE PRODUCTS: 2 isoforms; alpha (shown here) and beta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         with PIGF (By similarity)
SUBCELLULAR LOCATION: Sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to the extracellular matrix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pean Bioinformatics Institute. To
non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biophys. Res. Commun. 165:1198-1206(1989).
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                                                                                                                                                                                                                                                                                                                                              PDGF.
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VASCULAR ENDOTHELIAL GROWTH FACTOR A. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammaila; Eutheria; Rodentia; NCBL_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2002 (Rel. 41, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vascular endothelial growth factor D precursor (VEGF-D) (c-fos induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Orlandini M., Marconcini L., Ferruzzi R., Oliviero S.; "Identification of a c-fos-induced gene that is related to platelet-derived growth factor/vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FIGF OR VEGFD.
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                                                                                                                                                                      MEDLINE=1276411; PubMed=11279005;
MEDLINE=1276411; PubMed=11279005;
MEDLINE=1276411; PubMed=11279005;
Baldwin M.E., Catimel B., Nice E.C., Roufail S., Hall N.E.,
Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;
Stenvers K.L., Karkkainen M.J., Alitalo K., Stacker S.A., Achen M.G.;
The specificity of receptor binding by vascular endothelial growth
factor dis different in mouse and man.";
J. Biol. Chem. 276:19166-19171(2001)
J. Biol. Chem. 276:1916-1917(2001)
J. Biol. Che
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STRAIN=C57BL/6J; TISSUE=Fibroblast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 belonging to platelet-derived growth factor/vascular endothelial growth factor family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-98288130; PubMed-9622638;
Avantaggiato V., Orlandini M., Acampora D., Oliviero S.,
"Embryonic expression pattern of the murine figf gene, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEVELOPMENTAL STAGE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genomics 42:483-488(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamada Y., Nezu J.-I., Shimane M., Hirata Y.;
Molecular cloning of a novel vascular endothelial growth factor,
VEGF.D.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97349118; PubMed=9205122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RECEPTOR SPECIFICITY.
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nes 7; Conserv
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                  body structures and organs of the embryo such as limb buds, accustic ganglion, teeth, heart, anterior pituitary as well lung and kidney mesenchyme, liver, derma, and periosteum of
                                                                                                      TISSUE SPECIFICITY: Highly expressed in fetal and adult lung DEVELOPMENTAL STAGE: Expressed in a dynamic pattern in several
                                                                                                                                                         SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Natl. Acad. Sci. U.S.A. 93:11675-11680(1996).
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77.8%;
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                             liver, derma, and periosteum of the
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a growth factor
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CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; X99572; CAA67892.1; -. EMBL; D89628; BAA14002.1; -. HSSP; P15692; IVPP.
                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Growth factor; Glyc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a license agreement (See http://www.isb-sib.ch/announce/
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
                                                                                     000731;
01-APR 1993 (Rel. 25, Created)
01-APR 1996 (Rel. 34, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
                                                                                                                                                                           MOUSE
                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
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                                                            permeability factor) (VPF). VEGF OR VEGFA.
                                                                                                                                                            VEGA_MOUSE
                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                 150
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PTM: Undergoes a complex proteolytic maturation which generates a variety of processed secreted forms with increased activity towar vectors and vector-2. Vector-b first form an antiparallel homodimer linked by disulfide bonds before secretion. The fully processed vector-b is composed mostly of two Vector-bomodiogy domains (VHDs) bound by non-covalent interactions (By similarity).

SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                           1 CCNEESLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                 CCNEEGVMC 158
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                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                               STANDARD;
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                                                                                                                                                                                                                                                                                                      81.8%;
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POTENTIAL.
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INTRACHAIN (BY SIMILARITY).
INTRACHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                      Score 45; DB 1;
Pred. No. 0.69;
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N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
                  Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                               PRT;
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                                                                                                                                                                                                                                                                                            Mismatches
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                                                                                                                                                                                                                                                                                                                     Length 358;
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THE SECOND DESCRIPTION OF THE SECOND CONTROL OF THE SECOND CONTROL
                                                                                                                                      PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Anglogenesis; Growth factor; Glycoprotein;
                                          DISULFID
                                                                                                 Heparin-binding; Alternative SIGNAL 1 26
                                                                                                                                                                                                                                       PIAM; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                           MGD; MGI:103178; Vegf.
InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           characterization of transcriptional and post-transcriptional regulatory sequences."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "The mouse gene for vascular endothelial growth factor. Genomic structure, definition of the transcriptional unit, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [1]
SEQUENCE FROM N.A. (ISOFORMS VEGF-1; VEGF-2 AND VEGF-3).
MEDLINE-92274860; PubMed=1592003;
Breier G., Albrecht U., Sterrer S., Risau W.;
"Expression of vascular endothelial growth factor during embryonic angiogenesis and endothelial cell differentiation.";
Development 114:521-532(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shima D.T., Kuroki M., Deutsch U.,
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"Vascular endothelial growth factor. Regulation by cell
differentiation and activated second messenger pathways.";
J. Biol. Chem. 267:16317-16322(1992).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         splicing.

TISSUE SPECIFICITY: In developing embryos, expressed mainly in choroid placus, paraventricular neuroepithelium, placenta and kidney glomeruli. Also found in bronchial epithelium, adrenal gland and in seminiferous tubbles of testis. High expression of VEGF continues in kidney glomeruli and choroid placus in adulti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                               A43351; A43351.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             remains cell-surface associated unless released by heparin. ALTERNATIVE PRODUCTS: 3 isoforms; VEGF-3/VEGF188 (shown here), VEGF-1/VEGF164 and VEGF-2/VEGF120; are produced by alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          endothelial cell growth. It induces endothelial cell growth. It induces endothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFR1/Fit-1 and VEGFR2/Kdr receptors and to heparan sulfate and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with PIGF (By similarity).
SUBCELLULAR LOCATION: VEGF-1 and VEGF-2 are secreted while VEGF-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                heparin (By similarity).
SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S37052; AAB22252.1; -. S38083; AAB22253.1; -.
                                                                                                                                                                                                                                                                                                                                                                                       P15692; 2VPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               institutions as long
splicing; Multigene family.
BY SIMILARITY.
VASCULAR ENDOTHELIAL GROWTH FACTOR
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            There are no rest
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                                                                                                                                      Signal;
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Best Local
                                                                                                                                    Disalvo J., Bayne M.L., Conn G., Kwok P.W., Trivedi P.G., Soderman D.D., Palisi T.M., Sullivan K.A., Thomas K.A.;

"Purification and characterization of a naturally occurring vascular endothelial growth factor placenta growth factor heterodimer.";

J. Biol. Chem. 270:7717-7723(1995).

-I- FUNCTION: Growth factor active in angiogenesis, vasculogenesis an endothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFRI/FIt-1 and VEGFRZ/Kdr receptors and to heparan sulfate and
                                                                                                                                                                                                                                                                                                        MEDLINE=95221439; PubMed=7706320;
                                                                                                                                                                                                                                                                                                                                                                                       "Developmental expression of vascular endothelial growth factor (VEGF-A) splicing variants, VEGF-A188, VEGF-A164, and VEGF-A120 masseter muscle.";
                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 27-40.
                                                                                                                                                                                                                                                                                                                                TISSUE-Glial
                                                                                                                                                                                                                                                                                                                                                                   Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORMS VEGF-A188; VEGF-A164; VEGF-A144 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conn G., Bayne M.L., Soderman D.D., Kwok P.W., Sullivan K.A., Palisi T.M., Hope D.A., Thomas K.A.; "Amino acid and cDNA sequences of a vascular endothelial cell mitogen that is homologous to platelet-derived growth factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-90207249; PubMed-2320579;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-AUG-1990 (Rel. 15, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A) (Vascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARSPLIC
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        permeability factor) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P16612; Q9QXG7; Q9QXG6; Q9JKX7; 01-AUG-1990 (Rel. 15, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VEGF OR VEGFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
with PIGF (By similarity).

SUBCELLULAR LOCATION: VEGF-A120 is acidic and freely secreted.

SUBCELLULAR LOCATION: VEGF-A120 is acidic and freely secreted.

VEGF-A164 is more basic, has heparin-binding properties and, although a signicant proportion remains cell-associated, most is freely secreted. VEGF-A188 is very basic; it is cell-associated freely secreted and is bound avidly by heparin and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85 CCNDEALEC 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                            heparin (By similarity).
SUBUNIT: Homodimer; disulfide-linked. Also found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CCNEESLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Natl. Acad. Sci. U.S.A. 87:2628-2633(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                   Arakawa T., Okayama M., Oota I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             214 AA;
                                                                                                                                                                                                                                                                                                                           tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118 G
25283 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        129
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66.7%;
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Pred. No. 1
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K -> N (IN ISOFORM VEGF-1).
MISSING (IN ISOFORM VEGF-2).
GE -> ER (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B5540B51E4BB6E17 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Inomata K.;
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RRACOCO GE DE DE LA COCO GE DE
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VEGA_HORSE
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SIGNAL

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VASCULAR ENDOTHELIAL GROWTH FA

DISULFID 51 93 BY SIMILARITY.

FINISHED 86 127

BY SIMILARITY.

FINISHED 76 76 INTERCHAIN (BY SIMILARITY).

FINISHED 85 85 INTERCHAIN (BY SIMILARITY).

FINISHED 86 129

FINISHED 76 76 INTERCHAIN (BY SIMILARITY).

FINISHED 76 76 INTERCHAIN (BY SIMILARITY).

FINISHED 85 INTERCHAIN (BY SIMILARITY).

FINISHED 93 BY SIMILARITY.

FINISHED 93 BY SI
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Best Local
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                                                                                                                                                                                                                                                                                                                                     VEGA_HORSE STANDARD; PRT; 190 AA. 09GKR0; 01-MAR-2002 (Rel. 41, Created) 01-MAR-2002 (Rel. 41, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation update) Vascular endothelial growth factor A precurso:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; P15692; 1VPP.
InterPro; IPRO00072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS00249; PDGF_2; 1.
Ritogen; Angiogenesis; Growth factor; Glycoprotein; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M32167; AAA41211.1; -. EMBL; AF215725; AAF19212.1; -. EMBL; AF215726; AAF19212.1; -. EMBL; AF222779; AAF25958.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A35987; A35987.
SEQUENCE FROM N.A
                                                                                                                                                                                                                       Equus caballus (Horse).
                                                                                                                                                                                                                                                                       VEGF OR VEGFA
                                                                                                                                                                                                                                                                                                             permeability factor)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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                                                                                 NCBI_TaxID=9796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
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TISSUE SPECIFICITY: Expressed in the pituitary, in brain, i particularly in supraoptic and paraventricular nuclei and t choroid plexus. Also found abundantly in the corpus luteum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         form by heparin, heparinase or plasmin (By similarity). ALTERNATIVE PRODUCTS: At least 4 isoforms; VEGF-A188 (s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCNDEALEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93
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164
208
                                                                                                                            Chordata; Craniata; Vertebrata; Perissodactyla; Equidae; Equus.
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66.7%;
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                                                                                                                                                                                                                                                                                                                  (VPF).
                                                                                                                                                                                                                                                                                                                                                        growth factor A precursor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 42; DB
Pred. No. 1.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED (GLCNAC. . .).

K -> N (IN ISOFORM VEGF-A164).

MISSING (IN ISOFORM VEGF-A164).

MISSING (IN ISOFORM VEGF-A12).

MISSING (IN ISOFORM VEGF-A144).

V -> A (IN REF. 2; AAF19212).
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INTERCHAIN (BY SIMILARITY).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60FBB876F5304946 CRC64;
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                                                                                                                                                                                                                                                                                                                                                             (VEGF-A) (Vascular
                                                                                                                                                                            Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   by alternative
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Best Local S
Matches 6
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"Cloning of cDNA and high-level expression of equine vascular endotherial growth factor (VEGF).";
submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
-i-FUNCTION: Growth factor active in angiogenesis, and endothel cell growth. Induces endothelial proliferation and vascular permeability (By similarity).
-i-SUBGELLULAR LOCATION: Secreted but remains associated to cell-
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
DISULFID
                                                                                                                                                             VEGA_PIG STANDARD; PRT; 190 AA.
P49151; O9GL52;
01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor A precursor (VEGF-A) (Vascular permeability factor) (VPF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
          Sharma H.S., Tang Z.H., Gho B.C.H., Verdouw "Nucleotide sequence and expression of the
                                    TISSUE=Heart;
MEDLINE=95143284;
                                                                                                         Eukaryota; Metazoa; Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mitogen; Angiogenesis; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1.
                                                                 SEQUENCE FROM N.A.
                                                                                                                                    Sus scrota (Pig).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AB053350; BAB20890.1;
                                                                                           NCBI_TaxID=9823;
                                                                                                                                                   VEGF OR VEGFA.
                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
nes 6; Conserv
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                                       PubMed=7841203;
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190
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                                                                                                         Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
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66.7%;
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Pred.
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BY SIMILARITY.
BY SIMILARITY.
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INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC. . .) (POT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor; Glycoprotein; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                              87E9E161439E5F87 CRC64;
                                                                                                                                                                                                                                                                                                                                                                         ed. No. 1.9
                                                                                                                                                                                                                                                                                                                                                                                      41;
No.
                          Verdouw P.D.;
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1.9;
           porcine vascular
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                                                                                                          Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                       Euteleostomi;
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VEGA_CANFA
ID VEGA_C
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DT 01-MAR
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GN VEGF 0
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Best Local
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                                                                         VEGA_CANFA STANDARD; PRT; 214 AA. Q9MYV3; Q9XSF5; Q9XSF4; Q9XSF3; Q1-MAR-2002 (Rel. 41, Created) 01-MAR-2002 (Rel. 41, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation update) Vascular endothelial growth factor A precursor permeability factor) (VPF).
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SMART; SM00141; PbGF; 1.
PROSITE; PS00249; PbGF_1; 1.
PROSITE; PS00249; PbGF_2; 1.
Mitogen; Anglogenesis; Growth factor; Glycoprotein; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                       Canis familiaris (Dog).
Eukaryota; Metazoa; Cho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Heparin-binding; Multigene SIGNAL 1 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene.";
Submitted (NOV-2000)
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Lee T., Canty J.M.;
"PCR cloning of porcine cardiac vascular endothelial growth
Eukaryota; Metazoa; Čhordata; (
Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000072; PDGF. Pfam; PF00341; PDGF; 1.
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HSSP; P15692; 1VGH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X81380; CAA57143.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              similarity).
SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          heparin (By similarity).
SUBUNIT: Homodimer; disulfide-linked. Also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     with PIGF (By similarity).
SUBCELLULAR LOCATION: Secreted
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6; Conser
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66.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 41; DB 1;
Pred. No. 1.9;
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T -> A (IN REF. 2).
; 04D40B8D7913047F CRC64;
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                       Craniata;
  Fissipedia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                       Vertebrata;
  Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 190;
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                                                                                                                           (VEGF-A) (Vascular
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                          Euteleostomi;
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Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: Growth factor active in angiogenesis, vasculogenesis endothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFR1/Fit-1 and VEGFR2/Kdr receptors and to heparan sulfate an
                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID DISULFID
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Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AJ133758; CAB82426.1; -.
EMBL; AF133250; AAD29684.1; -.
EMBL; AF133249; AAD29682.1; -.
EMBL; AF133248; AAD29682.1; -.
                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
Mitogen; Angiogenesis; Growt
Heparin-binding; Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Vascular endothelial growth factor (VEGF) and bearing dogs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20125516; PubMed=10661874; Scheidegger P., Weiglhofer W., Suarez
                                                                                                                                                                                                                                                                       VARSPLIC
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                                                                                                                                                                                                                                                                                                                   VARSPLIC
                                                                                                                                                                                                                                                                                                                                           CARBOHYD
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                                                                                                         Local
85 CCNDEGLEC
                                          1 CCNEESLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              similarity).

ALTERNATIVE PRODUCTS: At least 3 isoforms; VEGF188 (shown here), VEGF182 and VEGF164; are produced by alternative splicing. VEGF182 and VEGF164; The PDGF/VEGF FAMILY OF GROWTH FACTORS. SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        heparin (By similarity).
SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer with PloF (By similarity).
SUBCELLULAR LOCATION: Secreted but remains associated to cells of the control of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to the extracellular matrix unless
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chem.
                                                                                    Similarity 6; Conser
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                                                                                      Conservative
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                                                                                                         74.5%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Growth factor; Glycoprotein; Signal; native splicing; Multigene family.
POTENTIAL.
                                                                                                                                                                                                     W.
                                                                                  ; Score 41; DB; Pred. No. 2.1; 1; Mismatches
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                                                                                                                                                                                                                                                                N-LINKED (GLONAC. . .) (PÓTENTIAL).

K -> N (IN ISOFORM VEGF-164).

MISSING (IN ISOFORM VEGF-182).
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INTERCHAIN (BY SIMILARITY).
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BY SIMILARITY.
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S (IN REF. 2).
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                                                                                    2
                                                                                                                              Length 214;
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tent is in
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                                                                                  Gaps
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P15692; Q16889; O60720; O75875; Q9UL23; Q9UH58; Q9H1W9;
01-APR-1990 (Rel. 14, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
01-MAR-2004 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "The human gene for vascular endothelial growth factor. Multiple protein forms are encoded through alternative exon splicing."; J. Biol. Chem. 266:11947-11954(1991).
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MEDLINE-90069608; PubMed-2479986;
Leung D.W., Cachianes G., Kuang W.-J., Goeddel D.V.,
"Vascula" endothelial growth factor is a secreted ang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vascular endothelial growth factor A precursor permeability factor) (VPF).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. (ISOFORM VEGF206).
MEDLINE-92168017; PubMed-1791831;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
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                               TISSUE=Breast
                                                      SEQUENCE FROM N.A.
                                                                                                                Blochim.
                                                                                                                                                                                                                          TISSUE=Kidney;
MEDLINE=99096474; PubMed=9878851;
                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                  "VEGF145, a secreted vascular endothelial binds to extracellular matrix."; J. Biol. Chem. 272:7151-7158(1997).
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                                                                                                                                                                                                                                                                                                                                                                                                                     Poltorak Z., Cohen T., Sivan R., Kandelis Keshet E., Neufeld G.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fourth molecular species and characterization of alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Houck K.A., Ferrara N., Winer J., Cachianes G., Li B., Leung D.W., "The vascular endothelial growth factor family: identification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tischer E., Mitchell R., Hartman T., Silva M., Gospodarowicz D., Fiddes J.C., Abraham J.A.;
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MEDLINE=91268072; PubMed=1711045;
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                                                                                                                        Lei J., Jiang A., Pei D.;
"Identification and characterization of a new splicing vascular endothelial growth factor: VEGF183.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *AIDS-associated Kaposi's sarcoma cells in culture express vascular
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97207275; PubMed=9054410;
                                                                                                             Biophys. Acta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biophys. Res.
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  PubMed=9450968
                                                                                                                                                                                                                                                                              (ISOFORM VEGF183)
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PubMed=1567395;
                                                      (ISOFORM VEGF165).
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Primates;
                                                                                                          1443:400-406(1998).
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PRELIMINARY SEQUENCE OF 27-36; 43-50 AND 59
MEDLINE=90062112; PubMed=2584205;
Connolly D.T., Olander J.V., Heuvelman D.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Renal glomerulus;
MEDLINE-99394945; PubMed-10464055;
Whittle C.J., Gillespie K.M., Harr
Harner S.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jingjing L., Xue Y., Agarwal N., Roque "Human Muller cells express VEGF183, a vascular endothelial growth factor.";
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"Identification of a human VPF/VEGF 3'
hypoxia-induced mRNA stability.";
Mol. Biol. Cell 9:469-481(1998).
X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS)
MEDLINE-99119204; PubMed-9922142;
                                                                                                                                                                                                                                                                                                              Fiebich B.L., Jaeger B., Schoellmann C.,
Kochs G., Marme D., Hug H., Weich H.A.;
"Synthesis and assembly of functionally
endothelial growth factor homodimers in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Human cDNA for vascular endothelial growth factor isoform VEGF121."; Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (DEC-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sato J.D., Whitney R.G.;
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                                                                                                                      x-ray Crystallography (1.93 angstroms)
MEDLINE=98035455; PubMed=9351807;
                                                                                                                                                                                                                                 Muller Y.A., Li B., Christinger H.W., Wells J.A.,
                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 27-41.
MEDLINE=93145946; Pubmed=7678805;
                                                                                                                                                                                                                                                                                                                                                                                                                       Siegel N., Haymore B.L., Leimgruber R., Feder J.; "Human vascular permeability factor. Isolation from U937 cells."; J. Biol. Chem. 264:20017-20024(1989).
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                                             Structure 5:1325-1338(1997).
                                                                                       The crystal
                                                                                                      Muller Y.A., Christinger H.W., Keyt B.A.,
                                                                                                                                                                       Proc. Natl.
                                                                                                                                                                                    "Vascular endothelial growth mapping of the kinase domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                          ystal structure of vascular to 1.93-A resolution: multi
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                                                                                                                                                                    the kinase domain receptor binding sit Acad. Sci. U.S.A. 94:7192-7197(1997).
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                                                                                                                                                                                                                                                                                                               active human insect cells.
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                                                                       de Vos A.M.;
elial growth factor
py flexibility and r
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                                                                                                                                                                                  site.";
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EMBL; M75136; AAA88116.1; --
PIR; E36787; E36787.
Hypothetical protein; Zinc;
SEQUENCE 82 AA; 8821 MW;
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                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                               VEGC_RAT STANDARD; PRT; 126 AA.
035757;
01-MAR-2002 (Rel. 41, Created)
01-MAR-2002 (Rel. 41, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Vascular endothelial growth factor C precursor (VEGF-C) (Vascular
                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                 endothelial growth factor related protein) (VRP) (Flt4 ligand) (Flt4-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
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MEDLINE-92087490;
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13.
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SUBCELLULAR LOCATION: SECLECTION: A SUBCELLULAR LOCATION: SECLECTION OF PTM: Undergoes a complex proteolytic maturation which generates variety of processed secreted forms with increased activity towariety of processed form could activate VEGRR-VEGFR-3, but only the fully processed form could activate VEGRR-VEGF-C first form an antiparallel homodimer linked by disulfide VEGF-C first form an antiparallel homodimer linked by disulfide Negroba Refore secretion, a cleavage occurs between arg-227 and
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66.7%;
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    Mismatches

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Pred. No.
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Best Local
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with PIGF (By similarity).

-!- SUBCLIULAR LOCATION: VEGF121 is acidic and freely secreted.

VEGF165 is more basic, has heparin-binding properties and,
although a signicant proportion remains cell-associated, most is
freely secreted. VEGF189; is very basic; it is cell-associated
after secretion and is bound avidly by heparin and the
extracellular matrix, although it may be released as a soluble
form by heparin, heparinase or plasmin.

-!- ALTERNATIVE PRODUCTS: 7 isoforms; VEGF106 (shown here), VEGF189,
VEGF183, VEGF165/VEGF, VEGF148, VEGF145 and VEGF121; may be
produced by alternative splicing.

-!- TISSUE SPECIFICITY: The VEGF189, VEGF-165 and VEGF-121 isoforms
are widely expressed, whereas the VEGF206 and VEGF-145 are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proliferation of endothelial cells via the VEGF-2 receptor. FASEB J. 15:1667-1669(2001).

FINCTION: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. It induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis, and induces permeabilization of blood vessels. It binds to the VEGFRIFTL-1 and VEGFR2/Kdr receptors and to heparan sulfate and heparin. Neuropilin-1 binds isoforms VEGF-165 and VEGF-145.

1- SUBUNIT: Homodimer; disulfide-linked. Also found as heterodimer
                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Solution structure of the heparin-binding domain of vascular endothelial growth factor."; Structure 6:637-648(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "1H, 13C, and 15N backbone assignment and secondary structure of receptor-binding domain of vascular endothelial growth factor."; protein Sci. 6:2250-2260(1997).
                                                                                                                             between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Vascular endothelial growth factor induces cyclooxygenase-dependent proliferation of endothelial cells via the VEGF-2 receptor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-98298440;
Fairbrother W.J.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Crystal structure peptide.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Murphy J.F.,
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    1 CCNEESLIC 9
                                                                                                                                                                                                      INDUCTION: Regulated by growth factors, cytokines, gonadotropi nitric oxide, hypoxia, hypoglycemia and oncogenic mutations. SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS. DATABASE: NAME-R&D Systems' cytokine mini-reviews: VEGF;
                                                                                                                                                                                   WWW-"http://www.rndsystems.com/asp/g_sitebuilder.asp?bodyId=230"
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Champe M.A., Christinger H.W.,
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RESULT 14
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Mitogen; Growth factor; Glycoprotein;
Cleavage on pair of basic residues; Multigene family.
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O9n1s2 capreolus c
Q9mzb1 ovis aries
Q9n1s1 capreolus c
Q9ms51 orf virus.
O42571 xenopus lae
O77643 ovis aries
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## ALIGNMENTS

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Q91ZE4; PTEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
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KITKIN V., Mazitschek R., Krishnan J., Steffen A., Waltenberger J.,
Pepper M.S., Giannis A., Sleeman J.P.;
"Characterization of indollinones which specifically inhibit VEGF-C-and
VEGF-D-induced activation of VEGFR-3 but not VEGFR-2.";
EMBL; AV03728; AAK96008.1;
EMBL; AV03728; AAK96008.1;
SEQUENCE 326 AA; 37106 MW; D7CAEBA6C9FABB7D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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50 CCNEESVMC 158
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MEDLINE-98191144; PubMed-9530113;
Skorjanc D., Jaschinski F., Heine G., Pette D.;
"Sequential increases in capillarization and mitochondrial enzymes
Low-frequency-stimulated rabbit muscle.";
Am. J. Physiol. 274:C810-C818(1998).
EMBL; AR022179; AACL5469.1; -.
HSSP; P15692; 2VPF.
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01-JAN-1998 (TrEMBLrel. 05,
01-JAN-998 (TrEMBLrel. 05,
01-JUN-2001 (TrEMBLrel. 05,
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SEQUENCE
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                 SEQUENCE
                                                                                                                                      InterPro; IPR000072; PDGF. Pfam; PF00341; PDGF; 1. ProDom; PD001629; PDGF; 1. SMART; SM00141; PDGF; 1.
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Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus
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SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Inoue K., Kawabe Y., Kodama T.;
"Rabbit VEGF colon, partial.";
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ
EMBL; AB020216; BAA36949.1; -.
HSSP; P15692; 2VPF.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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                      Score 45; DB
Pred. No. 0.1;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                          FACTOR (FRAGMENT)
                      1;
                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                DDCE2C5B29E69359 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 45; I
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            687638661E98DEE0 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                   75
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0.092;
                                  DВ
0.1;
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                                           Length 75;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                      0;
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                      Gaps
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Q9MZB1
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Best Local
                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                           Q9MZB1 PRELIMINARY;
Q9MZB1;
Q1-OCT-2000 (TrEMBLrel. 15, C
01-OCT-2000 (TrEMBLrel. 15, L
01-DEC-2001 (TrEMBLrel. 19, L
VASCULAR ENDOTHELIAL GROWTH F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9N1S2;
                                                                                                                         Ovis aries (Sheep).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;

Bovidae; Caprinae; Ovis.

NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Detection of growth factors in the capreolus).";
                                                                                                                                                                                                                                                                                                                                                                                                                                   ProDom; PD001629; PbGF; 1.
SMART; SM00141; PbGF; 1.
PROSITE; PS00249; PbGF_1; 1.
PROSITE; PS50278; PbGF_2; 1.
NON_TER
1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Capreolus capreolus (Roe deer).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoide;
Cervidae; Odocoileinae; Capreolus.
NCBI_TaxID=9858;
                    EMBL; AF250375; AAF HSSP; P15692; 1VPP.
                            Submitted (MAR-2000) to the Submit AF250375; AAF75258.1;
                                                                          TISSUE-PLACENTAL ARTERY ENDOTHELIUM;
Zheng J., Tsoi S.C., Magness R:R.;
                                                                                                                                                                                   VEGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anim. Reprod. Sci. 64:65-75(2000).
EMBL; AF152593; AAF73232.1; -.
HSSP; P15692; 2VPF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
VASCULAR ENDOTHELIAL GROWTH FACTOR ISOFORM 121 (FRAGMENT)
                                                                 "Growth factor expression
                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=20532861; PubMed=11078967;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-TESTIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VEGF
           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                           24 CCNDESLEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28
                                                                                                                                                                                                                                                                                                                                                                   Local
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Pro; IPR000072; PF00341; PDGF;
                                                                                                                                                                                                                                                                                                                                                        Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000072; PDGF
                                                                                                                                                                                                                                                                                                                                                                                                                78 AA;
                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                             32
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9131 MW;
                                                                                                                                                                                                                                                                                                                                                                   81.8%;
77.8%;
                                                                   'n
                                                                                                                                                                                         Last sequence update)
Last annotation update)
FACTOR (FRAGMENT).
                                            EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                Score 45;
Pred. No. (
                                                                ovine fetal placental artery
                                                                                                                                                                                                                                                                                                                                                                                                                7EE20DDFFC17847C CRC64;
                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fickel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                testis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ruminantia; Pecora; Cervoidea;
                                                                                                                                                                                                                                                    118 AA
                                                                                                                                                                                                                                                                                                                                                                 0.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78
                                                                                                                                                                                                                                                                                                                                                                               DB 6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               roe deer (Capreolus
                                                                                                                                                                                                                                                                                                                                                                             Length 78;
                                                                 endothelial
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RESULT

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Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-20532861; PubMed-11078967; Wagener A., Blottner S., Goritz F., "Detection of growth factors in the capreolus)."; anim. Reprod. Sci. 64:65-75(2000). EMBL; AF152524; ARF73233.1; -...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
NON_TER 1 1
SEQUENCE 118 AA; 13931 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Capreolus capreolus (Roe deer).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidea;
Cervidae; Odocoileinae; Capreolus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
VASCULAR ENDOTHELIAL GROWTH FACTOR ISOFORM 165 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                          Q9YMF3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000072; PDGF. Pfam; PF00341; PDGF; 1. ProDom; PD001629; PDGF; 1. SMART; SM00141; PDGF; 1.
                                                                                                                   Q9YMF3;
01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last seq
01-JUN-2001 (TrEMBLrel. 17, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. TISSUE-TESTIS;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9N1S1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00141; PDGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PrgDom; PD001629; PDGF; 1.
                       Viruses; dsDNA viruses, Parapoxvirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP; P15692; 1VGH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9858;
                                                                            Orf virus.
                                                                                                      VASCULAR ENDOTHELIAL GROWTH
       NCBI_TaxID=10258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                     24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 7; Conserv
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123 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14354 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81.8%;
77.8%;
                                                     no RNA stage; Poxviridae; Chordopoxvirinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                    Last sequence update)
Last annotation update
FACTOR HOMOLOG VEGF-E:
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Pred. No. 0.16;
l; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 45; DB 6
Pred. No. 0.16;
                                                                                                                                                                                                                               PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OA756F54105A4CE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fickel J.;
testis of roe deer (Capreolus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123 AA.
                                                                                                                                                                                                                               132
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
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RESULT
077643
ID 07
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042571
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Best Local
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042571;
01-JAN-1998
01-JAN-1998
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              not VEGFR-1 (Flt-1) receptor tyrosinė kinasės.";
EMBO J 18:363-374(1999).
EMBL; AF106020; AAD03735.1; -.
HSSP; P15692; 1VPP.
InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [1]
SEQUENCE FROM N.A.
STRAIN-D1701;
STRAIN-D19107753; PubMed-9889193;
MEDLINE-99107753; PubMed-9889193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1. SEQUENCE 132 AA; 14763 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Weyer M., Clauss M., Lepple-Wienhues A., Waltenberger J.,
Augustin H.G., Ziche M., Lanz C., Buettner M., Rziha H.J., Dehio C.;
"A novel vascular endothelial growth factor encoded by orf virus,
UEGF-E, mediates angiogenesis via signalling through VEGFR-2 (KDR) but
                                                                                                                                                                                                      Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00749; PDGF; 1; 1.
PROSITE; PS502749; PDGF; 2; 1.
SEQUENCE 148 AA; 17234 MW;
                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VEGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
VASCULAR ENDOTHELIAL GROWTH FACTOR 122.
                                                                                                                                                                                                                                                                       InterPro; IPR000072; PDGF Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                               Dev. Dyn. 0:0-0(1997).
EMBL; AF008593; AAB63679.1;
                                                                                                                                                                                                                                                                                                                                      Cleaver O., Tonissen K.F., Saha M.S., Krie
Reovascularization of the Xenopus embryo.
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                              Xenopodinae; Xenopus.
NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                  HSSP; P15692; 1VPP
                                                                                86 CCNDESLEC
                                                                                                                                   Local Similarity nes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
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                                                                                                           1 CCNEESLIC 9
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                                                                                                                                     Conservative
                                                                                   94
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77.8%;
                                                                                                                                                  81.8%;
                                                                                                                                                                                                                                                                                                                                                       Saha M.S., Krieg P.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 45; DB 12; Pred. No. 0.17;
                                                                                                                                                  Score 45;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15F403A068B72926 CRC64;
                                                                                                                                                                                                         4AD153CA2F8B1E95 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   148
                                                                                                                                                                DB 13; Length 148;
                                                                                                                                                   .19;
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077643 077643;

PRELIMINARY;

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Best Local S
Matches 7
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Best Local (
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ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00279; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
SEQUENCE 190 AA; 22342 MW; (
                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        042572 PRELIMINARY;
042572;
01-JAN-1998 (TIEMBLIEL 05,
01-JAN-1998 (TIEMBLIEL 19,
01-DEC-2001 (TIEMBLIEL 19,
                                                                                                                                                                                   SEQUENCE
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                                                                                                                                                                                                                                                                                                                                     "Neovascularization of the Xend"
"Neovascularization of the Xend
Dev. Dyn. 0.0-0(1997).
EMBL; AF008594; AAB63680.1; -.
HSSP; P15692; 1VGH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopus.
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EMBL; AF071015; AAC23608.1; -.
HSSP; P15692; 1VGH.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
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Mammalia; Eutheria; Ceta
Bovidae; Caprinae; Ovis.
NCBI_TaxID~9940;
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01-NOV-1998 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
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STRAIN-COLUMBIA-RAMBOULLIET;
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Similarity 7; Conserv
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PS50278; PDGF_2; 1.
194 AA; 22672 MW;
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77.8%;
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Pred. No. 0.
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Q05458;
Q05458;
Q1-NOV-1996 (TrEMBLrel. 0
Q1-NOV-1996 (TrEMBLrel. 0
Q1-DEC-2001 (TrEMBLrel. 1
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01-NOV-1998
01-NOV-1998
01-DEC-2001
De Antoni A., D Angelo M., Dal Pero F., Sartorello Pallavicini A., Lanfranchi G., Valle G.;
"The DNA sequence of cosmid 14-13b from chromosome Saccharomyces cerevisiae reveals an unusually high overlapping open reading frames.";
Yeast 13:261-266(1997).
EMBL; 269382; CAA93403.1; -.
SEQUENCE 126 AA; 12845 MW; 4FC6548A29E58628 CRC
                                                                                                 SEQUENCE FROM N.A.
MEDLINE=97245296; Pubmed=9090055;
                                                                                                                                        Saccharomyces cerevisiae (Baker's yeast).

Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces.

NCBI_TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Expression of messenger ribonucleic acid splice variants for vascular endothelial growth factor in the penis of adult rats and humans."; Biol. Reprod. 60:398-404(1999).
EMBL; AF080594; AAC36708.1; -.
HSSP; P15692; 1VPP.
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Buttyan R., Shabsigh R.;
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STRAIN-SPRAGUE-DAWLEY; TISSUE-PENIS;
MEDLINE-99115228; PubMed-9916007;
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Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Futheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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PROSITE; PS50278; PDGF_2; 1.
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Pred. No. 0.
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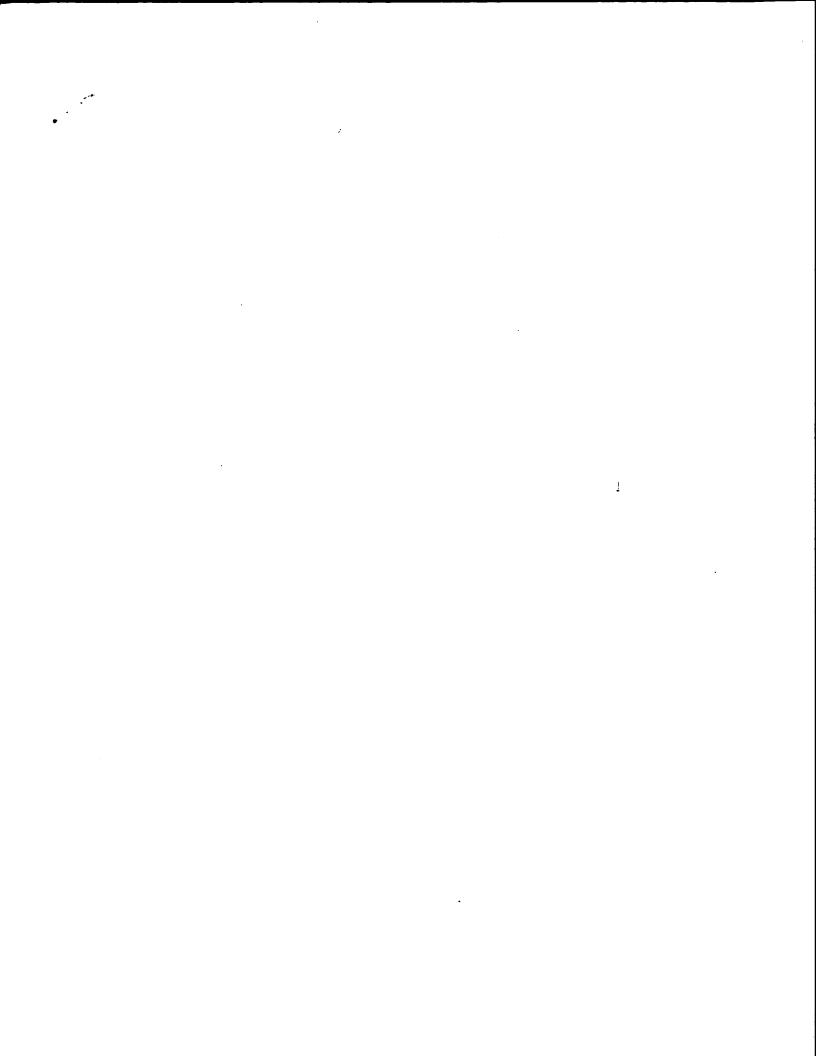
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RESULT
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JBO1. Chem. 273:3033-3038(1998).
JBO279; AACO5442.1; -.
HSSP; P15692; IVPP,
MGD; MGI:103178; Vegf.
Interpro; IPR000077; PDGF.
Pfam; PF00241; PDGF; 1.
PROSTITE; PS00249; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSTITE; PS00249; PDGF-1; 1.
PROSTITE; PS00249; PDGF-1; 1.
SRART; SM00141; PDGF-1; 1.
SRART; SM00141; PDGF-1; 1.
SRART; SM00141; PDGF-1; 1.
SROSTITE; PS00278; PDGF-1; 1.
SEQUENCE 141 AA; 15550 MW; A27C4EF
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O1-AUG-1998 (TremBLrel. 07, C.
O1-AUG-1998 (TremBLrel. 19, L.
O1-DEC-2001 (TremBLrel. 19, L.
VASCULAR ENDOTHELIAL GROWTH F
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Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Cypriniformes; Cyprinidae; Danio.
NCBI_TaxID=7955;
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Sugihara T., Kaul S.C., Mitsul Y., Wadhwa R.;
"Enhanced expression of multiple forms of VEGF is
spontaneous immortalization of murine fibroblasts.
Biochim. Biophys. Acta 1224:365-370(1994).
                                                                          VEGF
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
PROSITE; PS00249; PDGF_1; 1.
PROSITE; PS50278; PDGF_2; 1.
SEQUENCE 144 AA; 16479 MW;
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073682;
01-AUG-1998 (TrEMBLrel. 07, Created)
01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
VASCULAR ENDOTHELIAL GROWTH FACTOR ISOFORM 165.
                                                                                                                                                                                                                                                  Weinberg E.S., Ge R.;
"Cloning and characterization of vascular
"Cloning and characterization of vascular
(VEGF) from zebrafish, Danio rerio.";
Biochim. Biophys. Acta 1397:14-20(1998).
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                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.
NCBI_TaxID-7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rerio."
                                                                                                                      PROSITE; PS00249; PDGF_1; 1. PROSITE; PS50278; PDGF_2; 1. SEQUENCE 188 AA; 21756 MW;
                                                                                                                                                            InterPro; IPR000072; PDGF.
Pfam; PF00341; PDGF; 1.
ProDom; PD001629; PDGF; 1.
SMART; SM00141; PDGF; 1.
                                                                                                                                                                                                                               EMBL; AF016244; AAC41274.1; HSSP; P15692; 1VGH.
                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE=9822600; PubMed=9545518;
Liang D., Xu X., Chin A.J., Balasubramaniyan N.V.,
Weinberg E.S., Ge R.;
                                                                                                                                                                                                                                                                                                                                                                                                                        Brachydanio rerio (Zebrafish) (Zebra danio).
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Pfam; PF00341; PDGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                  ZFIN; ZDB-GENE-990415-273; vegf.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Vascular endothelial growth factor 121 isoform from zebrafish,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Liang
                                                     Local Similarity
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CCNDEALEC
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66.7%;
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66.7%;
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                                                                Score 42; DB 1
Pred. No. 0.94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 42; DB 13; Pred. No. 0.73;
                                                                                                                      FD203334EF365D1E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           303E6A7407AA0832 CRC64;
                                                     Mismatches
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                                                                               DB 13;
                                                                                                                                                                                                                                                                                   endothelial growth factor
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                                                                               Length 188;
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Search completed: June Job time: 1613 sec

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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                                      Homo sapiens vascu
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Homo sapiens vascu
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Human VEGF-D amino
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AAUU4553 AAW44286 AAB70685 AAB70685 AAW14994 AAW86228 AAW86229 AAW86227 AAW86226 AAR10916 AAR10916 AAW3305 AAR733434 AAR733435 AAR7334435 AAW86206	AAB29049 AAY70750 AAY70983 AAU08441 AAY97573 AAB37606 AAU04552
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## ALIGNMENTS

RESULT AAU04528

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AAU04528 standard; Protein;

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neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
18-JAN-2000; 2000US-0176293
                        18-JAN-2001; 2001WO-US01533
                                                   26-JUL-2001.
                                                                            WO200152875-A1.
                                                                                                                                                                    Disulfide-bond
                                                                                                                                                                                                Disulfide-bond
                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                   Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                             VEGF based bicyclic dimeric peptide #2.
                                                                                                                                                                                                                                                                                                                                                    26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                 AAU04528;
                                                                                                  /note= "A disulfide bond forms between residue I and residue I of an identical peptide to form a dimeric peptide, or between residue I and residue I7 of the sequence appearing as AAU04527 also formia dimeric peptide"
                                                                                                                                                                                              Location/Qualifiers 2..9
                                                                                                                                                                                 /note= "This bond cyclises the peptide'
                                                                                                                  forming
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ARUGULT
AAUG4522
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CC characterised by angiogenesis, neovascularisation or lymphangiogenesis. CC The condition is diabetic retinopathy, psoriasis, head, heat or cold trauma, substance-induced meovascularisation of the liver, excessive conference induced neovascularisation of the liver, excessive conference induced neovascularisation of the liver, excessive conference induced neovascular sequelae, or chronic liver conference induced neovascular sequelae, or chronic liver conference in a mammal (the mammal has a condition characterised by fillid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to inmediate vascular permeability care also used in combination with an anti-inflammatory agent, to treat accumulation in combination with an anti-inflammatory agent, to treat accumulation in combination with an anti-inflammatory agent, to treat and combination in expecially rheumantory agent, to treat and chronic inflammator, and arthritis, monitaria and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 9
                                                                                                                                                                    Human; VEGF-D; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
WO200152875-A1
                                                                   Homo sapiens.
                                                                                                                                          diabetic retinopathy;
                                                                                                                                                                                                                                                                                                                     Human VEGF-D amino acids Vall01-Thr 173.
                                                                                                                                                                                                                                                                                                                                                                                            26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU04522;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU04522 standard; protein; 73 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The sequence represents a dimeric bicyclic peptide of the invention whose 3-dimensional structure is modelled on the expose loop of however the sequence of the vertice of the control of the control of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing a monomeric monocyclic peptide by a measuring method of producing method method of producing method method of producing method metho
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diabetic retinopathy.
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                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                          chronic inflammation
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Pred. No. 6.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC amino acids VallOl-Thr 173, used together with the C-terminal growth factor)
CC amino acids VallOl-Thr 173, used together with the C-terminal 23
CC residues of VEGF to make a hybrid theoretical molecule for 3
CC dimensional modelling. The sequence is used in a method of producing
CC a monomeric monocyclic peptide by a measuring beta-beta carbon separation
CC distances on opposite antiparallel strands of a peptide loop fragment
CC from an exposed loop of a growth factor protein and cyclising the peptide
CC bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic
CC peptide with at least one amino acid deleted prior to cyclisation are
CC used to interfere with angiogenesis, neovascularisation or
CC lymphangiogenesis in a mammal with a condition characterised by
CC angiogenesis, neovascularisation or lymphangiogenesis. The condition is
CC diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised
CC malignant or benign tumour, post-recovery cerebrovascular accident,
CC post-angiophasty restenosis, head, heat or cold trauma, substance-induced
CC neovascularisation of the liver, excessive hormone-related angiogenic
CC dysfunction, diabetes induced neovascular sequelae, hypertension induced
CC neovascularisation of the liver, excessive hormone-related angiogenic
CC used to modulate vascular permeability in a mammal (the mammal has a
CC condition characterised by fluid accumulation in peripheral limbs or in
CC image blood vessels and lymphatic vasculature. The monomeric and bicyclic
CC peptides are used to interfere with at least one biological activity
CC induced by VEGF, VEGF-C or -D and are also used in combination with an
CC anti-inflammatory agent, to treat a chronic inflammation, especially
CC returnation accumulation of the peripheral limbs or in
CC induced by VEGF, vEGF-C or -D and are also used in combination with an
                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                AAU04520 standard; protein; 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 90-91; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-JUL-2001
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                                                                                                                                                                                                                                                                                                                        1 CCNEESLIC
                                                                                                                                                                                                                       ω
                                                                                                                                                                                                                                                                                    ccneeslic
                                                                                                                                                                                                                                                                                                                                                                Similarity
9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001WO-US01533
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                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
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                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                   No.
                                                                                                                                                                                                                                                                                                                                                                                   0.22;
                                                                                                                                                                                                                                                                                                                                                                                                          DВ
                                                                                                                                                                                                                                                                                                                                                                                                   22;
                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                     Length 73;
                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                              Gaps
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Human; VEGF-D; vascular endothelial growth factor; neovascularisation; lymphangiogenesis; psoriasis; t

angiogenesis;

0,

Human VEGF-D amino acids Vall01-pRO186.

26-SEP-2001

(first entry)

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RESULT
AAY23889
ID AAY2
XX
AC AAY2
XX
AC AAY2
XX
AC AAY2
XX
XX
DT 21-5
XX
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                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The sequence represents Human VEGF-D (vascular endothelial growth factor) amino acids VallO1-R0186. The sequence is used in a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphanglogenesis in a mammal with a condition characterised by
                                                                                                                                                                                                                                                                                                                                                                                                      neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF. Or -D and are also used in combination with an anti-inflammatory agent, to treat a chronic inflammation, especially rheumatoid arthritis, psoriasis and diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oxidizing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-442248/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page 89; 102pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Achen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JAN-2001; 2001WO-US01533.
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                      21-SEP-1999
                                                            AAY23889;
                                                                                                                                                                                                                                                                                                                                                                       Sequence
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                                                                                               AAY23889 standard;
                                                                                                                                                                                             $5
                                                                                                                                                                                                                                 1 CCNEESLIC 9
                                                                                                                                      4
                                                                                                                                                                                          ccneeslic 53
                                                                                                                                                                                                                                                                        Similarity
9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                       96
                                                                                                                                                                                                                                                                        Conservative
                  (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RA,
                                                                                               Protein; 109
                                                                                                                                                                                                                                                                                        100.0%; Score 55; D
100.0%; Pred. No. 0.
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                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cendron
                                                                                                                                                                                                                                                                                                          DB 22;
                                                                                                                                                                                                                                                                                          . 28;
                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                            Length 96;
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KKW X E X T X C X
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                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence represents human vascular endothelial growth CC factor (VEGF)-D. The specification describes a human cell line complete which stably expresses VEGF-D, or fragments/analogues having VEGF-D complete which stably expresses VEGF-D, or fragments/analogues having VEGF-D complete the complete having vegF-D complete the presence nucleic acids or triplex DNA, VEGF-D variants or antibodies (especially chimeric complete the complete 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 9
                    Truncated VEGF-D; vascular endothelial growth factor; human; monoclonal antibody; VEGF receptor; VEGFR-2; VEGFR-3; vascular permeability disorder; endothelial cell proliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           endothelial cell proliferation, migration, survival and differentiation and lymphangiogenesis without inducing vascular permeability.
                                                                                                                        Human truncated VEGF-D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A human cell line stably expressing vascular endothelial growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-405368/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9933485-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vascular endothelial growth factor; VEGF; VEGF-D; malignant melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human vascular endothelial growth factor
                                                                                                                                                                      20-NOV-2000
                                                                                                                                                                                                                                                                 AAB11931 standard; protein; 109 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                            53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
nes 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CCNEESLIC
                                                                                                                                                                                                                                                                                                                     G
                                                                                                                                                                                                                                                                                                                                                                                               ccneeslic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                r; psoriasis; angiogenesis; lymphangiogenesis; skin graft;
healing; lymphedema; scleroderma; anhydrotic ectodermal c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D, useful for treating melanomas or tumours expressing VEGF-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 72; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alitalo K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                               61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 55;
100.0%; Pred. No.
tive 0; Mismatcl
lymphangiogenic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0.32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
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ARW53ULT
AAW53CA
AW53CA
XX
AC AAW5
XX
AC AAW5
XX
DT 03-A
XX
DT 03-A
XX
DT W1S-A
CT 03-A
CT 03-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CC This sequence represents a 109 amino acid truncated human VEGF-D CC (vascular endothelial growth factor D), lacking both the N- and CC C-terminal regions. The invention relates to a monoclonal antibody, or CC fragments thereof, which is specifically reactive with the truncated CC human VEGF-D, and methods of preparing the antibody. The antibody of the convention interferes with the binding of VEGF-D to the VEGF receptors CC VEGFR-2 and VEGFR-3, but does not interfere with the binding of VEGF to CC these receptors and additionally is not reactive with VEGF-C. The CC antibody may be used to treat disorders associated with vascular CC permeability, endothelial cell proliferation, angiogenesis, collar permeability, endothelial cell proliferation, angiogenesis, and CC lymphangiogenesis, neovascularisation and endothelial cell arthropathies. The antibody may also be used to treat fluid accumulation collar heart and/or lung via modulation of vascular permeability. It may additionally be used to detect VEGF-D and may be used to image lymphantic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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                    transplants; collateral circulation; infarction; arterial coronary artery disease; inhibition; cancer; treatment; diabetic retinopathy; lung disorders; blood circulation; gaseous exchange; chronic obstructive airway disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel compositions comprising antibodies reactive to vascular endothelial growth factor-D, useful for treating, e.g. angiogenesis, lymphangiogenesis and neovascularization disorders -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neovascularisation disorder; endothelial cell differentiation disorder; cancer; diabetic retinopathy; psoriasis; arthropathy; pulmonary oedema; detection; diagnosis; imaging; lymphatic vasculature.
gaseous exchange; chroni-
intestinal malabsorptive
                                                                                                                    vascular endothelial growth factor; VEGF-D; angiogenesis;
modification; acceleration; wound healing; tissue; organ;
                                                                                                                                                                                                                                                         03-AUG-1998
                                                                                                                                                                                                                                                                                                          AAW53240
                                                                                                                                                                                                                                                                                                                                                         AAW53240 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
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17-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fig 1; 44pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in tissue.
                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                       vascular
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0113254
99US-0134556
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                                                                                                                                                                                                                                                                                                                                                         Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                               endothelial growth factor D (VEGF-D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .08;
                                                                                                                                                                                                                                                                                                                                                         325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 55;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
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     risk;
                                                                                                  stenosis;
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                                                                        В
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                                                                                                                                                                                                                                                                                                     O (VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis in wound healing, tissue or organ transplantation, or to establish collateral circulation in tissue infarction or arterial stenosis, such as coronary artery disease, and inhibition of angiogenesis in the treatment of cancer or of diabetic retinopathy. It can also be used in the treatment of lung disorders to improve blood circulation in the lung and/or gaseous exchange between the lungs and the blood stream or to improve blood circulation to the heart and O2 gas permeability in cases of cardiac insufficiency, to improve blood flow and gaseous exchange in chronic obstructive airway disease, or to treat malabsorptive syndromes in the intestinal tract. Quantitation of VEGF-D in cancer biopsy specimens may be useful as an indicator of future metastatic risk. Antagonists can be used for treating e.g. conditions such as congestive heart failure, invascular nermeability whe nordarts can also be useful concerns as in wasculations of fluid in the lung resulting from the invasculations and the lung resulting from the invasculations.
                                                                                                                                                                                               Query Match
Best Local
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for detect
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 16; Pages 57-58; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated vascular endothelial growth factor-D - used to develop products for use in e.g. modifying angiogenesis or treating lung, heart or intestinal disorders
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10-FEB-1997;
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23-AUG-1996;
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                                                                                                                       1 CCNEESLIC 9
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                                                                                                                                                                        Similarity
9; Conser
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ilarity 100.
Conservative
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97US-0038814.
97AU-0007435.
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96AU-0003554.
96US-0031097.
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96AU-0001825
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156..158
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                                                                                                                                                                                               0.83;
                                                                                                                                                                                                                       DB 19;
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                                                                                                                                                                    CC coronary disease. Antagonists of the sequences are used to inhibit CC angiogenesis in tumours and to treat inflammation (where associated with CC increased vascular permeability), diabetic retinopathy, rheumatoid CC arthritis or psoriasis. Agonists are also useful for stimulating CC (lymph)angiogenesis. The proteins are also useful for raise antibodies. CC binding agents (potential therapeutic agents) and to raise antibodies. CC The antibodies are useful as therapeutic (ant)agonists; for detection, CC qurification and targeting of proteins for in vivo or in vitro diagnosis (c) (including imaging) or for therapy (including when linked to e.g. a label CC or cytotoxin); and for immunotyping of cells, e.g. for detecting minimal CC residual disease or haematopoietic progenitor/stem cells. It is also CC contemplated that the sequences might be useful for treating a very wide CC range of other disorders, e.g. autoimmune diseases; allergy; cancer; CC infectious diseases (viral, bacterial, fungal or parasitic); CC neurodegeneration, also as chemotactic agents or for stimulating CC regeneration of the nervous system etc.
                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amellorate disease and to detect diseases, or susceptibility, by detecting mutations or the presence or amount of angiogenic protein expression. Particularly they are used to stimulate wound healing, growth of damaged bone and tissue, and for repair of vascular tissue, especially peripheral arterial disease, critical limb ischaemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This sequence is vascular endothelial growth factor-D (VEGF-D), which is an angiogenic protein of the invention. The angiogenic proteins and the DNA sequences encoding them, are used to prevent, treat or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New nucleic acid encoding angiogenic proteins, useful e.g. for promoting healing of wounds and treating peripheral arterial critical limb ischaemia or coronary disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peripheral arterial disease; critical limb ischaemia; coronary disea angiogenesis; tumour; inflammation; diabetic retinopathy; psoriasis; rheumatoid arthritis; autoimmune disease; allergy; cancer; therapy; infectious disease; neurodegeneration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Page 226-227; 244pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-APR-2001 (first entry)
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                                                                                                                                     Sequence
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                                       Local Similarity
nes 9; Conser
1 CCNEESLIC
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                                                                                                                                     325 AA;
                                       Conservative
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                                                     100.0%;
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                                  Score 55; DB 2: Pred. No. 0.83; Mismatches
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                                                       The present sequence represents a human zvegf2 growth factor encoded by the zvegf2 cDNA which was isolated from a human heart cDNA library. zvegf2 protein in a dimeric form acts as a mitogen for fibroblasts or smooth muscle cells. zvegf2 is claimed to be useful for stimulating the revascularisation of tissue or the re-endothelialisation of vascular tissue. zveff2 is particularly claimed to be useful for the treatment of full-thickness skin wounds, including venous stasis ulcers and diabetic ulcers. The zvegf2 protein is also claimed to be useful as an additive in tissue adhesives for promoting revascularisation of the healing tissue. Antagonists against zvegf2 can be used to block its mijogenic, chemotactic and angiogenic effects. The antagonists may
                         mitogenic, chemotactic and angiogenic effects. The antagonists may therefore be useful for reducing growth of solid tumours by inhibiting neovascularisation of the developing tumour or by directly blocking
                                                                                                                                                                                                                                                                                 New isolated vascular endothelial growth factor - used to develop products for treating e.g. wounds, burns, myocardial infarction, tumours, psoriasis, arthritis, restenosis or organ transplants
                                                                                                                                                                                                                                                    Claim 1; Pages 53-54; 77pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                 Conklin DC, Gilbert T, Hart CE, Nygaard S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     angiogenic effect; tumour; diabetic retinopathy; psoriasis; arthritis;
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06-DEC-1996;
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           tumour cell growth, in the treatment of diabetic retinopathy,
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96US-0759657
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109..1
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257..2
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295..3
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24..108
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Pro-region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Cysteine-rich domain""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Balbiani ring motif"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Cysteine-rich domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Receptor binding domain"
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and scleroderma

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RESULT
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Best Local
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23-AUG-1996;
11-NOV-1996;
14-NOV-1996;
05-FEB-1997;
10-FEB-1997;
          such as coronary artery disease, and inhibition of angiogenesis in the treatment of cancer or of diabetic retinopathy. It can also be used in the treatment of lung disorders to improve blood circulation in the lung and/or gaseous exchange between the lungs and the blood stream or to improve blood circulation to the heart and 02 gas
                                                                        The sequence is that of human lung vascular endothelial growth factor D (VEGF-D). VEGF-D can be used for e.g. acceleration of angiogenesis in wound healing, tissue or organ transplantation, or to establish collateral circulation in tissue infarction or arterial stenosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vascular endothelial growth factor; VEGF-D; angiogenesis; modification; acceleration; wound healing; tissue; organ; transplants; collateral circulation; infarction; arterial stenosis; coronary artery disease; inhibition; cancer; treatment; diabetic retinopathy; lung disorders; blood circulation; gaseous exchange; chronic obstructive airway disease;
                                                                                                                                           Claim 16; Pages 60-61; 101pp; English.
                                                                                                                                                                    New isolated vascular endothelial growth products for use in e.g. modifying angiog heart or intestinal disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  intestinal malabsorptive syndrome; biopsy; metadetection; diagnosis; congestive heart failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                               Achen MG,
                                                                                                                                                                                                                                                                                        (UYHE-)
                                                                                                                                                                                                                                                                                                                              19-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                               21-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W09807832-AJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens vascular endothelial growth factor D (VEGF-D).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW53241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW53241 standard;
                                                                                                                                                                                                                                                                                                    (LUDW-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145 ccneeslic 153
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ø
                                                                                                                                                                                                                         1998-179057/16.
DB; AAV20807.
                                                                                                                                                                                                                                                                                      UNIV HELSINKI
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9; Conser
                                                                                                                                                                                                                                                             Alitalo K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                        97US-0051426.
96AU-0001825.
96US-0023751.
96US-0033554.
96US-0031097.
97AU-0004954.
97US-0038814.
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                                                                                                                                                                                                                                                                                                    INST CANCER RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                                                                                             97AU-0007435
                                                                                                                                                                                                                                                                                                                                                                                                                                              97WO-US14696
 cases of cardiac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein; 354
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                                                                                                                                                                                                                                                                                        LICENSING
                                                                                                                                                                                                                                                             Stacker SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 55;
Pred. No.
                                                                                                                                                                                                                                                                                        LTD.
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insufficiency,
                                                                                                                                                                                growth factor-D - used to angiogenesis or treating
                                                                                                                                                                                                                                                             Wilks AF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              metastatic risk;
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eart and O2 gas
to improve blood
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                                                                                                                                                                                lung,
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145 ccneeslic 153

1 CCNEESLIC

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Conservative

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XX I5---
XX IFI
DR N-P:
YF LTG:
PT TTG:
XX VEGI
PT T
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Matches
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Best Local
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                                                                                                                                                                                                    The present sequence represents human vascular endothelial growth factor D (VEGP-D). The VEGF-D protein, compounds and antibodies, which can bind the protein, may be useful in, e.g. gene therapy and in treatment of inflammation and oedema. Vectors, containing the VEGF-D DNA, and VEGF-D DNA sequences may be used for screening for the compounds which bind to
                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 18-20; 52pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF-D protein encoded by DNA - useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CHUG-) CHUGAI RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-JUL-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human;
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145 ccneeslic
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                                                                                                                                                                          sequences may be VEGF-D protein.
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DB; AAV15156.
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  Similarity
9; Conserv
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9; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                           oedema
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                                                                                                                             354 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 354 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oedema.
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                       100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULAR MEDICINE INC
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Score 55; DE
Pred. No. 0.9
0; Mismatches
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Pred. No. 0.9
); Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                for,
                       DB:
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0.9;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  gene therapy and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 354;
                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                            CC (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has CC (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has CC vulnerary, cytostatic, antirheumatic, antiarthritic, antipsoriatic and CC antidiabetic activity and acts as an angiogenesis and vascularization CC regulator. An antisense molecule of the invention is useful for treating CC or preventing cancer, rheumatoid arthritis, psoriasis and diabetic CC retinopathy by inhibiting angiogenic activity or inappropriate CC vascularization including formation and proliferation of new blood CC vessels, growth and development of tissues, tissue regeneration and organ CC and tissue repair in a subject. The products of the invention are useful CC for preparing medicaments for treating wounds such as dermal ulcers, CC pressure sores, venous sores, diabetic ulcers and burns and to promote Skin graft growth, tissue repair proliferation of new blood vessels, cissue regeneration and organ repair by promoting angiogenic activity or vascularization. This sequence represents the human VEGD protein used
                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-DEC-1998;
18-MAR-1999;
08-NOV-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New vascular endothelial growth factor protein, useful for treating or preventing diseases associated with inappropriate angiogenesis activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Fig 11; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-442669/38.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human VEGD protein
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                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                           to illustrate the method of the invention.
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145
                                                                                                                      Local Similarity hes 9; Conserv
                                                           1 CCNEESLIC 9
ccneeslic 153
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う SN,
                                                                                                                                                                                                                                                                                354 AA;
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, Xu J;
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99US-0124967.
99US-0164131.
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Pred. No.
                                                                                                                      Mismatches
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Screening a human subject for increased risk of developing a lymphatic disorder, comprises assaying a nucleic acid to determine a mutation altering the sequence of a vascular endothelial growth factor receptor-3 -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is the protein sequence of the human vascular endothelial growth factor D (YEGF-D). It was used to demonstrate the methods of the invention, which involve the screening of individuals to determine which vascular endothelial growth factor receptor 3 (VEGFR-3, also known as Flt4 or fms-like tyrosine kinase 4) alleles they possess and thus their likelihood of developing hereditary lymphoedema. Conditions associated with lymphoedema include Milroy-Nonne syndrome,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (LUDW-) LUDWIG INST CANCER RES.
(UYHE-) UNIV HELSINKI LICENSING LTD OY
(UYPI-) UNIV PITTSBURGH.
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                     Human prepro-vascular endothelial growth factor
                                                                                   17-AUG-2000
                                                                                                                                                                                               AAY70750 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                      145 ccneeslic 153
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9; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          early onset lymphoedema
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                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                          CC referred as vascular endothelial growth factor receptor 3) in CC endothelial cells of blood vessels adjacent to malignant neoplasm. The CC endothelial cells of blood vessels adjacent to malignant neoplasm. The CC ilgand to Fit4 thereby inhibiting Fit4 mediated proliferation of vascular CC endothelial cells. The compound is useful for treating neoplastic disease such as breast carcinomas, squamous cell carcinomas, lymphomas, melanomas CC and sarcomas. Fit4 receptor tyrosine kinase binding compounds can be used CC for manufacturing medicament useful for diagnostic screening, imaging and CC treatment of malignancies characterised by Fit4-expressing blood cells. CC The Fit4 gene maps to chromosomal region 5q35 and is expressed as 5.8 kb CC and 4.5 kb mRNAs which differ in their 3' sequences and are CC differentially expressed in HEL and DAMI cell lines. Fit4 CC belongs to a subfamily of class III receptor tyrosine kinases (RTKs). CC It is used as a target for tumour imaging and anti-tumour therapy. CC factor D (VEGF-D), a specific example of Fit4 binding compound. A CC recombinantly matured VEGF-D lacking residues 1-92 and 202-334 CC retains the ability to activate VEGFR-2 and VEGFR-3 receptors and CC associate as non-covalently linked dimers.
                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treating neoplastic diseases such as lymphoma, carcinomas, melanomas and sarcomas, involves administering a compound capable of inhibiting binding of ligand proteins to fms-like tyrosine kinase-4 receptor -
                Human vascular
                                                09~AUG-2000
                                                                                    AAY70983
                                                                                                                     AAY70983 standard; Protein; 354
                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; receptor tyrosine kinase; RTK; Flt4; fms-like tyrosine kinase 4; VEGFR-3; vascular endothelial growth factor receptor-3; chromosome 5q35; cytostatic; tumour imaging; anti-tumour therapy; treatment; diagnosis; neoplastic disease; lymphoma; carcinoma; breast; squamous cell; melanoma sarcoma; malignancy; VEGF-D; vascular endothelial growth factor D.
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                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                 AA;
                endothelial
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          factor (VEGF)-D protein
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Matches Query Match Best Local

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Score 55; Pred. No.

0.9; 21;

Length 354; Indels

ΧΩ AAU08441 RESULT

AAU08441 standard; Protein;

354 AA

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The present amino acid sequence is the complete human prepro-vascular endothelial growth factor (VEGF)-D. VEGF-D has the ability to stimulate re-endothelialisation of an injured blood vessel, without significant stimulation of smooth muscle cell proliferation. It can bind to and stimulate VEGFR-2 (vascular endothelial growth factor receptor) and/or VEGFR-3 phosphorylation in cells that express such receptors. An
                           anti-restenosis agent comprising either a VEGF-D gene or protein is used in a method to reduce or prevent restenosis and stenosis of a blood vessel following vascular trauma e.g., cardiovascular surgery and percutaneous transluminal coronary angioplasty.
                                                                                                                                                                                                              Preventing stenosis and restenosis endothelial growth factor proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vascular endothelial growth factor-D; VEGF; human; re-endothelialisation; vascular endothelial growth factor receptor; VEGFR; vascular trauma; blood vessel; cardiovascular surgery; anti-restenosis agent; prevention;
Sequence
                                                                                                                                                                                         Disclosure;
                                                                                                                                                                                                                                                                                                                                                   (LUDW-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200024412-A2
                                                                                                                                                                                                                                                                N-PSDB;
                                                                                                                                                                                                                                                                                                        Yla-herttuala S,
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                                                                                                                                                                                                                                                                AAD00340.
   354 AA;
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202..35
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= Carboxy_terminal_peptide
/note= "Cleavage results in part
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/note= "Processed vascular epithelial growth
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/note= "Cleavage results in fully-processed
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/note- "Cleavage results in partially-processed VEGF-D
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      354
                                                                                                                                                                                                                                                                                                                                   LICENSING S.
                                                                                                                                                                                      61pp; English
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                                                                                                                                                                                                                   mammals using vascular the nucleic acids encoding them
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                                                                                                                                                Query Match
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Matches 9; Conserv
                                                                                                                                                                                                                                                             The present invention relates to polypeptides that bind cellular receptors for vascular endothelial growth factors (VEGFs), the polynucleotides encoding them, and their use for identifying agents that modulate interactions between VEGFs and their receptors. VEGFs and their receptors play an important role in vasculogenesis, the development of the embryonic vasculature from early differentiating endothelial cells and angiogenesis, the process of forming new blood vessels from pre-existing ones. Modulators of interactions between VEGF and its receptors may be used to treat dysfunction of the endothelial cell regulatory system. Such disorders include cancers, abnormal angiogenesis, proliferative retinopathies, age-related macular degeneration, rheumatoid arthritis and psoriasis. The polypeptides of the invention exhibit unique receptor binding profiles compared to known naturally occurring VEGFs.

The present sequence represents the polypeptide for human VEGF-D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Polypeptides that bind cellular receptors for vascular endothelial growth factors, polynucleotides encoding them - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; vascular endothelial growth factor; VEGF-D; vasculogenesis; angiogenesis; blood vessel; cancer; proliferative retinopathy; psoriasis; age-related macular degeneration; rheumatoid arthritis; cardiovascular.
                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 227-228; 261pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-FEB-2000; 2000US-0185205.
18-MAY-2000; 2000US-0205331.
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Result
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Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched:
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2000
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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                                                                  US-08-915-795-3
US-08-915-795-5
5194596-17
5219739-18
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US-08-915-795-9
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US-08-915-795-9
US-08-915-795-9
US-08-586-039B-3
US-08-586-039B-31
US-08-742-243-44
US-08-915-794-34
US-08-915-794-34
US-08-742-243-44
US-08-91-794-3
US-08-742-243-44
US-08-742-243-43
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Compugen Ltd
Sequence 3, Appli Sequence 5, Appli Patent No. 5194596 Patent No. 5219739 Patent No. 5219739 Patent No. 5332671 Sequence 9, Appli Sequence 33, Appli Sequence 20, Appli Sequence 35, Appli Sequence 44, Appli Sequence 44, Appli Sequence 47, Appli Sequence 15, Appli Sequence 27, Appli Sequence 37, Appli Sequence 37, Appli Sequence 47, Appli Sequence 48, Appli Sequence 27, Appli Sequence 11, App
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Query Match Best Local Similarity

100.0%;

Score 55; Pred. No.

DB 4;

Length 325;

RESULT US-08-915- Sequence Requence Retent 1 Reput. Appl. Appl. Appl. Appl. Reput. Rep	44444333333322 5444433333322 544444333333322
795-3 3, Application 40.6235713 CINFORMATION: ICANT: Marc G. A ICANT: Marc G. A ICANT: Kari ALII E OF SEQUENCES: ESPONDENCE ADDREE EVANSINGTON EFFORMER: EVANSHLE POPE ENTING SYSTEM: FTWARE: PATENTION I ENT APPLICATION I ENT APPLICATION I ENT APPLICATION I ENT APPLICATION I ENTERNEY/AGENT INFORMER E EVANS, JOSei GISTRATION NUMBER LING DATE: LING ATION ENTERNEY/AGENT INFORMER EVANS, JOSei GISTRATION NUMBER GISTRATION NUMBER EVANS, JOSei GISTRATION NUMBER ENERCE/DOCKET NU LEPHONE: (202) 62 LEFAX: (202) 62 LEFAX: (202) 62 LEFAX: (202) 62 LEFAX: Inhear CULE TYPE: protu- THETICAL: NO INAL SOURCE: SSUE TYPE: Human -795-3	41 74.5 191 3 41 74.5 191 3 41 74.5 191 3 41 74.5 191 4 41 74.5 191 6 41 74.5 215 3 41 74.5 215 6 41 74.5 215 6 41 74.5 231 5 41 74.5 232 2 31 74.5 232 2 31 74.5 232 2 31 74.5 232 2 31 74.5 232 2 31 74.5 232 3 39 70.9 350 2
5 Edwards & Lenahan Luite 700 Lerica Lerica 11.0, Version #1.25	US-08-567-200A-2 US-08-807-992B-2 US-08-807-994-2 US-08-91-794-2 US-08-91-794-3 5332671-4 5240848-11 US-08-807-992B-3 US-08-866-39B-49 521973-2 5240848-7 PCT-US96-09001-10 US-08-824-996-9 US-08-807-992B-4 US-08-807-992B-4 US-08-999-811-4 US-08-999-811-4 US-08-999-811-4 US-08-999-811-4 US-08-999-811-4
P.L.L.C.	Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 3, Appli Sequence 3, Appli Patent No. 5240848 Sequence 4, Appli Sequence 4, Appli Sequence 10, Appli Sequence 7, Appli

Matches

9;

Conservative

0;

Mismatches

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RESULT 3
5194596-9
                 GROWTH FACTOR SEQUENCES: 32
                                    PATENT NO. 5194596

APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN; C.; MITCHELL, RICHARD L.

TIVLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
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; TISSUE TYPE: Human Lung
US-08-915-795-5
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                                                                                                                                                                                                                                                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:

NAME: EVANS, JOSEPH D.

REGISTRATION UNMBER: 26,269

REFERENCE/DOCKET NUMBER: 1064

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 354 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                          145
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
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                                                                                                                                                                                                                                   Local Similarity
nes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/915,795 FILING DATE: CLASSIFICATION: 536
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CITY: Washington
STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
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                                                                                                                                                                                                     1 CCNEESLIC 9
                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
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                                                                                                                                                                       CCNEESLIC 153
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                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                 354 amino acids
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Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marc G. ACHEN
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                                                                                                                                                                                                                                             Score 55; DB 4
Pred. No. 0.25;
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5219739-9
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5194596-17
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              Matches
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Query Match
Best Local Similarity
7; Conserv
                                                                                                                                                                                                                                                                           ; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES, JOHN ; C.; MITCHELL, RICHARD L. TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
                                                                                                                                                                                                                                                                                                                                   ; Patent No. 5194596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOHN C.; MITCHELL, RICHARD L.

TITLE OF INVENTION: DNA SEQUENCES ENCODING BVEGF120 AND HVEGF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN VAASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVEGF120 AND HVEGF121 NUMBER OF SEQUENCES: 40
                                                                                                                          SEQ ID NO:17:
                                                                                                                                                                                                                                                                   GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Patent No. 5219739
; APPLICANT: TISCHER, EDMUND G.;ABRAHAM, JUDITH A.;FIDDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO:9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO:9
                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 7; Conserv
                                                                                                                                         NUMBER OF SEQUENCES: 32
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/07/45
FILING DATE: 14-DEC-1989
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 387,545
FILING DATE: 27-JUL-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: 450,883
FILING DATE: 14-DEC-1989
APPLICATION NUMBER: 387,545
FILING DATE: 27-JUL-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/559,041
FILING DATE: 27-JUL-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/07/450,883
FILING DATE: 14-DEC-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 387,545
                                                                                                        LENGTH: 164
                                                                                                                                                                                                                                                                                                                                                                                                                         59 CCNDESLEC 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CCNEESLIC 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59 CCNDESLEC 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 120
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     7;
     Conservative
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                   81.8%;
77.8%;
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77.8%;
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77.8%;
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   μ,
                  Score 45; DB Pred. No. 3.7;

    Mismatches

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Pred. No. 2.8;
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                  DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٠<u>.</u>
 ۳.
                                  Length 164;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 120;
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 Indels
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CCNEESLIC

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RESULT 8
5332671-3
;Patent No. 5332671
;Patent No. 5332671
; APPLICANT: FERRARA, NAPOLEONE;LEUNG, DAVID W.H.
; APPLICANT: FERRARA, PRODUCTION OF VASCULAR ENDOTHELIAL CELL
; TITLE OF INVENTION: PRODUCTION OF VASCULAR ENDOTHELIAL CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
5219739-18
; Patent No. 5219739
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
; APPLICANT: TISCHER, EDMUND G.; ABRAHAM, JUDITH A.; FIDDES,
                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOHN C. MITCHELL, RICHARD L.

TITLE OF INVENTION: DNA SEQUENCES ENCODING BVEGF120 AND HVEGF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN VAASCULAR ENCOTHELIAL CELL GROWTH FACTORS, EVEGF120 AND HVEGF121 NUMBER OF SEQUENCES: 40
CURRENT APPLICATION DATA:
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Best Local Similarity
Thes 7; Conserv.
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TITLE OF INVENTION: DNA SEQUENCES ENCODING BVEGF120 AND ; HVEGF 121 AND METHODS FOR THE PRODUCTION OF BOVINE AND HUMAN ; VAASCULAR ENDOTHELIAL CELL GROWTH FACTORS, BVEGF120 AND HVEGF121; NUMBER OF SEQUENCES: 40
                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 27-JUL-1989
SEQ ID NO:18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; SEQ ID NO:17;
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                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 450,883
FILING DATE: 14-DEC-1989
APPLICATION NUMBER: 387,545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/(FILING DATE: 27-JUL-1990 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                     59 CCNDESLEC 67
                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/07/559,041 FILING DATE: 27-JUL-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 450,883
FILING DATE: 14-DEC-1989
APPLICATION NUMBER: 387,545
FILING DATE: 27-JUL-1989
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 164
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                                                                                                                                                                                                                                                                            Similarity 7; Conserv
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77.8%;
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77.8%;
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                                                                                                                                                                                                                                                                                           Score 45; DB 6; Length 164; Pred. No. 3.7;
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Pred. No. 3.
                                                                                                                                                                                                                                                                            Mismatches
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3.7;
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; MOLECULE TYPE:
; ORIGINAL SOURCE:
; TISSUE TYPE:
US-08-915-795-9
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Best Local Similarity
Thes 7; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; SEQ ID NO: 3
 Query Match
Best Local Similarity 66.7
Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 9, Application US/08915795 Patent No. 6235713
                                                                                                                                                                                                    TELEX: N/A
TELEX: N/A
INFORMATION FOR SEQ ID NO: 9
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Karl ALITALO
                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:

NAME: EVANS, JOSEPH D.

REGISTRATION NUMBER: 26,269

REFERENCE/DOCKET NUMBER: 1064

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/07/389,722
FILING DATE: 04-AUG-1989
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 15
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: GROWTH FACTOR NUMBER OF SEQUENCES: 11
                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 1200 G St
CITY: Washington
STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 369,424
FILING DATE: 21-JUN-1989
APPLICATION NUMBER: 351,117
FILING DATE: 12-MAY-1989
                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                           TYPE: amino acid
                                                                                                                                                                                                                                                                                  TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
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                                                                                                                                                                                                                                                                               (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               United States of America
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                                                                                                                                                            linear
                                                                                                                                        protein
                                                                                                       Mouse Lung
                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                           536
                    81.8%;
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Pred. No. 6.7;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                    1064/42983
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Pred. No. 4.
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                  DB 4; Length 321; 6.7;
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                                                                                                                                                            US-08-586-039B-33
                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                  US-08-915-795-8
                                                                                                        Sequence 33, Application US/08586039B Patent No. 6140073 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Application US/08915795 Patent No. 6235713
                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1028-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 8:
               APPLICANT: Bayne, Marvin L.
APPLICANT: Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDO
TITLE OF INVENTION: SUBGNIT
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Marc G. APPLICANT: Andrew I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                               150 CCNEEGVMC 158
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version.#1.25
                                                                                                                                                                                                                                                                                             Local Similarity
nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 536
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                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE TYPE: Mouse Lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: N/A
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1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358 amino acids
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Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kari ALITALO
                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACHEN
                                                        VASCULAR ENDOTHELIAL CELL GROWTH FACTOR C
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                                                                                                                                                                                                                                                                                                                 Score 45;
Pred. No. 7
                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                               DB 4; Length 358;
                                                                                                                                                                                                                                                                                                 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-586-039B-33
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                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (908) 594-4720 INFORMATION FOR SEQ ID NO: 33:
                                                                                                                     ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 146 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 18
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/1
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/6
FILING DATE: 28-MAR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
                                                          CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                              STATE: DC 20005
                                                                                                                                                                                            STREET: 1200 G St
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 16-JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Rahway
     APPLICATION NUMBER: US/08/469,427A FILING DATE: 06-JUN-1995 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85 CCNDEALEC 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
les 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
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                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CCNEESLIC 9
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66.7%;
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sequence 15, Application US/08469427A
Patent No. 5607918
                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Eriksson, Ulf
APPLICANT: Olofsson, Birgitta
APPLICANT: Alitalo, Kari
APPLICANT: Pajusola, Katri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Merck & Co., Inc. STREET: 126 E. Lincoln Avenue
                                                                                                                                                                    E: Evenson, McKeown, Edwards & Lenahan
1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                        VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND DNA CODING THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07/676,436
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Pred. No. 9.
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PRIOR APPLICATION DATA: APPLICATION NUMBER:

UMBER: US 08/397,651 01-MAR-1995

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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (202) 628-8844 INFORMATION FOR SEQ ID NO:
                                  TELEFAX: (202) 628-8844
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                    REFERENCE/DOCKET NUMBER: 10-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 08/397,651
FILING DATE: 01-MAR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                     FILING DATE: 06-DEC-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND TITLE OF INVENTION: DNA CODING THEREFOR NUMBER OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: EVANS, JOSEPH D
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 41
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 01-MAR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                             NAME: EVANS, Joseph D
REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: UZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Washington
STATE: DC
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Evenson, McKeown, Edwards & Lenahan, P.L.L.C. STREET: 1200 G Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 CCNDEALEC 92
                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CCNEESLIC 9
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amino acid
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               190 amino acids
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ALITALO, Kari
PAJUSOLA, Katri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
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                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76.4%;
66.7%;
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                                                                                                                                        26, 269
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                                                                                                                            1064/41979CP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 42; DB 1;
Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 189;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence 31, Application US/08586039B
Patent No. 6140073
                                                          Best Local Similarity
Matches 6; Conserv
                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                     TELEFAX: (908) 594-47.
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/124,259
FILING DATE: 20-SEP-1993
APPLICATION NUMBER: 07/676,436
FILING DATE: 28 MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Hand, J. Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                              TOPOLOGY: 11
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Microsoft Word 6
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/5
FILING DATE: 16-JAN-1996
CLASSIFICATION:
                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Bayne, Marvin L.
APPLICANT: Thomas Jr., Kenneth A.
TITLE OF INVENTION: VASCULAR ENDOTHELIAL CELL GROWTH FACTOR
TITLE OF INVENTION: SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: 11 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               76.4%;
Local Similarity 66.7%;
hes 6; Conservation
|||:|:| |
85 CCNDEALEC 93
                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 36,545
REFERENCE/DOCKET NUMBER: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Rahway
STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85 CCNDEALEC 93
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                             1 CCNEESLIC 9
                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Merck & ...,
street: 126 E. Lincoln Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: single TOPOLOGY: linear
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                                                                                                                                                                                            amino acid
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                                                                                                                                                                                                       190 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                      (908) 594-3905
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                                                                                                                                                protein
                                                                                                                                                                            single
                                                                                                                                                                                                                                                      594-4720
                                                                      76.48;
66.78;
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                                                        2,
                                                                        Score 42; DB 4;
Pred. No. 12;
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Pred. No. 12;
                                                        Mismatches
                                                                                   Length 190;
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                                                        Indels
                                                      0;
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                                                      Gaps
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                                                      0,
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RESULT

0;

US-08-586-039B-35

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PREMENT INFORMATION:
APPLICATION: Bayne, Marvin L.
APPLICANT: Thomas JT., Kenneth A.
APPLICANTON: SIBUNIT
NUMBER: Op: SOUTHER: SIBUNIT
NUMBER: Op: SOUTHER: SIBUNIT
NUMBER: SOUTHER: SIBUNIT
NUMBER: SIBUNIT
NUMBER:
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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                      Result
                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
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     õ
                                                                                           Pred. No. score grea and is der
                                                                                 No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using sw model
   Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                June 17, 2002, 15:58:23; Search time 95.43 Seconds (without alignments) 9.062 Million cell updates/sec
                                                                                                                                                                                                                                       PIR_71:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext
                                                                                                                                                                                                                                                                          Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                        283138 segs, 96089334 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-761-636A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                               pir2:*
pir3:*
pir4:*
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 Length
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                                                       SUMMARIES
Description
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45	44	43	42	41	40	39	38	37	36	35	34	w	32	31	30
34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
68.0	68.0	68.0	68.0	68.0		68.0	68.0	68.0	68.0		68.0	68.0	68.0	68.0	68.0
669	661	659	565	418	386	377	376	278	277	273	270	265	192	178	141
N	ب	L	N	Ŋ	N	N	ν	N	2	N	2	N	N	N	2
T17122	JN0870	JC4365	T08794	E71716	A57066	S77634	S70841	T11731	T11697	T11702	T11687	T11729	в96583	S15382	T12116
hypothetical prote	argininetRNA lig	argininetRNA lig	hypothetical prote	proline/betaine tr	prostacyclin recep	exopolysaccharide	hypothetical trans	NADH dehydrogenase		NADH dehydrogenase		NADH dehydrogenase		napin napB - rape	NADH dehydrogenase

## ALIGNMENTS

napin 1 precursor allergen Sin a I ( Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.;
A;Title: Complete genome sequence of a multiple d
A;Reference number: AB0502; PMID:11677608
A;Accession: AD090
A;Status: preliminary probable membrane protein STY4229 [imported] - Salmonella enterica subsp. enterica C;Species: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence\_revision 09-Nov-2001 #text\_change 27-Nov-2001 C;Accession: AD0990 C; Genetics: A; Gene: STY A;Molecule type: DNA A;Residues: 1-349 <PAR> A;Cross-references: GB:AL513382; PIDN:CAD08048.1; PID:g16505028; GSPDB:GN00176 A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-1487 <HIG>
A;Residues: 1-1487 <HIG>
A;Cross-references: GB:D30779; NID:g1375042; PIDN:BAA06443.1; PID:g691754
A;Cross-references: GB:D30779; NID:g1375042; PIDN:BAA06443.1; PID:g691754
C;Superfamily: phospholipase A2 receptor; C-type lectin homology; fibronectin type
F;181-222/Domain: fibronectin type II repeat homology <2F1>
F;380-503/Domain: C-type lectin homology <LCH> R;Higashino, K.; Ishizaki, J.; Kishino, J.; Ohara, O.; Arita, H.

Bur. J. Biochem. 225, 375-382, 1994
A;Title: Structural comparison of phospholipase-A(2)-binding regions in phospholipal A;Reference number: S48719; MUID:95010128
A;Accession: S48719; MUID:95010128 phospholipase-A(2) receptor protein - mouse C;Species: Mus musculus (house mouse) C;Date: 07-May-1995 #sequence\_revision 21-Jul-1995 #text\_change 20-Jun-2000 C;Accession: \$48719 C; Superfamily: conserved hypothetical protein HI0338 R; Parkhill, J.; Dougan, G.; James, th, T.; Connerton, P.; Cronin, A.; 밁 δÃ RESULT S48719 A; Status: preliminary h, T.; Connerton, P.; Cruman, h, T.; Connerton, P.; Cruman, P.; S.; Moule, S.; O'Gaora, P.; S.; Moule, S.; O'Gaora, P.; Ature 413, 848-852, 2001 Matches Query Match Best Local 929 CSVPLPSIC 937 STY4229 1 CSVPLTSVC 9 N Similarity 7; Conserv Conservative P.; Cronin, A.; 86.0**%**; 77.8**%**; Score 43; Pred. No. K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Cl Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Mismatches æ drug resistant 2; Simmonds, M.; Skelton, J.; Steven: drug resistant Salmonella enterica 1; Length 1487; Indels 0; Gaps 0;

885.0 882.0 882.0 882.0 788.0 770.0 77

NWRP1 S65478 S65481 S65480 S65480 T34649 PS0426 NWRP2 S07828 A25997 S25137

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F64484 B55538 S54788 T29764 D97130 A37931 S65447

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1487 349 364 376 376 432

AD0990 C86015 S47693 C91169

hypothetical prote hypothetical 38.5K

probable membrane phospholipase-A(2)

S48719

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hypothetical 38.5K protein (ftsy-nika intergenic region) - Escherichia coli N;Alternate names: hypothetical protein o376 c;Species: Escherichia coli C;Species: Escherichia coli C;Date: 27-Jan-1995 #seguence_revision 27-Jan-1995 #text_change 29-Sep-1999 C;Accession: S47693; E65144 R;Plunkett, G.
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A;Residues: 1-364 <STO>
A;Cross-references: GB:AE005174; NID:g12518133; PIDN:AAG58583.1; GSPDB:GN00145; UWGP:Z48
A;Experimental source: strain O157:H7, substrain EDL933
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C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 14-Sep-2001
C;Accession: C86015
C;Accession: C96015
R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, Nature 409, 529-533, 2001
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                                                                                                                                                                                                                A;Cross references: EMBL:U00039; NID:g466582; PIDN:AAB18449.1; PID:g912460 R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.; A.; Rose, D.J.; Mau, B.; Shao, Y. Science 277, 1453-1462, 1997 Science 277, 1453-1462, 1997 A;Title: The complete genome sequence of Escherichia coli K-12. A;Reference number: A64720; MUID:97426617 A;Accession: E65144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: yhhT
C;Superfamily: conserved hypothetical protein HI0338
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A; Gene: yhhT
A; Start cudon: GTG
C; Superfamily: cons
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                                                                                            A;Cross-references: GB:AE000423; GB:U00096; NID:g1789880; A;Experimental source: strain K-12, substrain MG1655
                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-376 <BLAT>
                                                                                                                                                                                         A; Status: preliminary; nucleic acid sequence not shown; translation not shown
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                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
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Best Local :
     Superfamily: conserved
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Pred. No. 4.9;
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                                                                                                                        PIDN:AAC76499.1; PID:g1789885
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C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Jun-2000 C;Accession: F64484 R;Bult, C.J.; White, O.; Olsen, G.J.; Zhou, L.; Fleischmann, R.D.; Sutton, G.G.; Bli R;Bult, C.I.; Overbeek, R.; Kirkness, E.F.; Weinstock, K.G.; Merrick, J.M.; Glodek; Reich, C.I.; Overbeek, R.; Kirkness, Cotton, M.D.; Roberts, K.M.; Hurst, M.A. rson, J.D.; Sadow, P.W.; Hanna, M.C.; Cotton, M.D.; Roberts, K.M.; Hurst, M.A. Science 273, 1058-1073, 1996 R.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woe: A;Authors: Kaine, B.P.; Borodovsky, M.; Klenk, H.P.; Fraser, C.M.; Smith, H.O.; Woe: A;Authors: Complete genome sequence of the methanogenic archaeon, Methanococcus Janna, A;Title: Complete genome sequence of the methanogenic archaeon, Methanococcus Janna,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: DNA
A;Residues: 1.376 <HAY>
A;Cross references: GB:BA000007; PIDN:BAB37746.1; PID:gl3363797; GSPDB:GN00154
A;Experimental source: strain O157:H7, substrain RIMD 0509952
C;GenetLos:
A;Gene: ECS4323
C;Superfamily: conserved hypothetical protein HI0338
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A; Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7
A; Reference number: A99629; MUID:21156231; PMID:11258796
A; Accession: C91169
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                                                                                                                                                           A; Map position: FOR1449710-1451008
C; Superfamily: aspartate transaminase
C; Keywords: aminotransferase
                                                                                                                                                                                                                                                                                                                   A;Reference number: A64300; MUID:96337999
A;Accession: F64484
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
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                                                                                                                                                                                                                                                                             A; Residues:
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Pred. No.
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Pred. No. 14;
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389 CVVPLTSFC

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uvrC protein - Pseudomonas syringae pv. syringae (strain B728a) (fragment)
C:Species: Pseudomonas syringae pv. syringae
C:Date: 08-Sep-1995 #sequence_revision 08-Sep-1995 #text_change 08-Sep-1995
C:Accession: B55538
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A; Residues: 1-22 <RIC>
A; Cross-references: GB:U09767
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J. Bacteriol. 176, 7468-7475, 1994
A;Title: Genetic evidence that the gacA gene encodes the cognate response regulator for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:Z49233; NID:g806541; PIDN:CAA89202.1; PID:g806542
C;Superfamily: calcium-dependent protein kinase; calmodulin repeat homology; protein kinase; cslmodulin repeat homology; protein kinase; tan C;Keywords: ATP; calcium binding: EF hand; serine/threonine-specific protein kinase; tan F;150-410/Domain: protein kinase homology <KIN>
F;158-166/Region: protein kinase ATP-binding motif F;453-485/Domain: calmodulin repeat homology <EF1>
F;449-521/Domain: calmodulin repeat homology <EF2>
F;525-557/Domain: calmodulin repeat homology <EF3>
F;559-591/Domain: calmodulin repeat homology <EF4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Chlamydomonas eugametos
C;Date: 08-Jul-1995 #sequence_revision 21-Jul-1995 #text_change 18-Jun-1999
C;Accession: S54788
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A;Accession: B55538
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                                                                                       hypothetical protein T21E3.3 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 18-Aug-2000
C;Accession: T29764
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A; Residues: 1-591 <SID>
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A; Accession: S54788
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                                           submitted to the EMBL Data Library, May 1997
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                    A; Description:
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Best Local
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5; Conserv
The sequence of C. elegans cosmid T21E3
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66.7%;
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55.6%;
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Pred. No.
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Pred. No.
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RESULT A37931

11

napin -

Swedish turnip (fragments)

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C;Superfamily: LDL receptor ligand-binding repeat homology <LDLL> F;15-49/Domain: LDL receptor ligand-binding repeat homology <LDLL> F;91-85/Domain: LDL receptor ligand-binding repeat homology <LDLL> F;90-132/Domain: LDL receptor ligand-binding repeat homology <LDLL> F;90-132/Domain: LDL receptor ligand-binding repeat homology <LDL2> F;149-185/Domain: LDL receptor ligand-binding repeat homology <LDL2> F;149-185/Domain: LDL receptor ligand-binding repeat homology <LDL2> F;190-225/Domain: LDL receptor ligand-binding repeat homology <LDL2> F;190-125/Domain: LDL receptor ligand-binding repeat homology <LDL2> F;190-125/Domain: LDL receptor ligand-binding repeat h
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F;190-225/Domain: LDL receptor ligand-binding repeat homology <LDL5>
F;229-272/Domain: LDL receptor ligand-binding repeat homology <LDL5>
F;285-316/Domain: LDL receptor ligand-binding repeat homology <LDL7>
F;323-359/Domain: LDL receptor ligand-binding repeat homology <LDL7>
F;323-359/Domain: LDL receptor ligand-binding repeat homology <LDL8>
F;369-405/Domain: LDL receptor ligand-binding repeat homology <LDL9>
F;816-856/Domain: LDL receptor ligand-binding repeat homology <LD10>
F;861-903/Domain: LDL receptor ligand-binding repeat homology <LD11>
F;908-943/Domain: LDL receptor ligand-binding repeat homology <LD13>
F;948-987/Domain: LDL receptor ligand-binding repeat homology <LD14>
F;948-987/Domain: LDL receptor ligand-binding repeat homology <LD14>
F;948-987/Domain: LDL receptor ligand-binding repeat homology <LD14>
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A;Residues: 1-2180 <DUZ>
A;Cross-references: EMBL:AF003133; PIDN:AAB54138.1; GSPDB:GN00019; CESP:T21E3.3
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F;1126-1165/Domain: LDL receptor ligand-binding repeat homology <LD16>
F;1172-1209/Domain: LDL receptor ligand-binding repeat homology <LD17>
F;1172-1209/Domain: LDL receptor ligand-binding repeat homology <LD17>
F;1213-1246/Domain: LDL receptor ligand-binding repeat homology <LD18>
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A; Residues: 1-91 <KUR>
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922 IPLTSVC 928
54 CSIGYTSVC 62
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R:Crouch, M.L.; Tenbarge, K.M.; Simon, A.E.; Ferl, R. J. Mol. Appl. Genet. 2, 273-283, 1983
A:Title: cDNA clones for Brassica napus seed storage A; Reference number: A92836; MUID:84113267
A; Accessian: A01330
A; Molecule type: mRNA A; Residues: 1-133 <CRO>
                                                                                                                                                                                                     napin 1 precursor - rape (fragment)
N;Alternate names: 1.7S seed storage protein
C;Species: Brassica napus (rape)
C;Date: 18-Apr-1984 #sequence_revision 18-Apr-1984 #text_change 18-Jun-1999
C;Accession: A01330
A;Cross-references: GB:K01544; NID:g167174; PIDN:AAA33005.1; PID:g167175
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A: Residues: 40-127 < MENN
C: Superfamily: wheat alpha-amylase inhibitor
C: Keywords: seed; storage protein
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A;Title: Primary structure of the major allergen of yellow mustard (Sinapis alba L.) see A;Reference number: S01791; MUID:89030681
A;Accession: S01792
A;Accession: S01792
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A;Title: Expression in Escherichia coli of Sin a 1, the major allergen from mustard.
A;Reference number: $65447; MUID:96235251
A;Accession: $65447
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C;Species: Sinapis alba (white mustard)
C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 17-Mar-1999
C;Accession: S65447; S01792
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allergen Sin a I - white mustard
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A;Title: Isolation and characterization of a trypsin inhibitor from the seeds of kohlrab A;Reference number: A37931; MUID:91282906
A;Accession: A37931
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A; Residues: 1-124 <SVE>
C; Superfamily: wheat alpha-amylase inhibitor
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                                                                                                                    storage proteins: evidence from nucleotide
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C;Superfamily: wheat alpha-amylase inhibitor
C;Keywords: seed; storage protein
                                                                                                                                                                                                                                                                                    A;Reference number: S65447; MUID:96235251
A;Accession: S65481
                                                                                                                                                                                                                                                                                                                    R;Gonzalez de la Pena, M.A.; Monsalve, R.I.; Batanero, E.; Villalba, M.; Rodriguez, Eur. J. Biochem. 237, 827-832, 1996
A;Title: Expression in Escherichia coll of Sin a 1, the major allergen from mustard
                                                                                                                                                                                                                                                                                                                                                                                     allergen Sin a I (clone SIN3) - white mustard (fragment) c;Species: Sinapis alba (white mustard) C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text. C;Accession: S65481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
S65481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-145 <GON>
A; Cross-references: EMBL:X91798; NID:g1009441; PIDN:CAA62908.1; PID:g1009442
A; Experimental source: seed
C; Genetics:
A; Gene: sin5
C; Superfamily: wheat alpha-amylase inhibitor
C; Keywords: seed; storage protein
                                                                                                                                              A; Gene:
                                                                                                                                                               C; Genetics:
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                                                                                                                                                                                                        A; Cross-references:
                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-145 <GON>
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A;Accession: S65478
A;Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Gonzalez de la Pena, M.A.; Monsalve, R.I.; Batanero, E.; Villalba, M.; Rodriguez Eur. J. Biochem. 237, 827-832, 1996
A;Title: Expression in Escherichia coli of Sin a 1, the major allergen from mustare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                allergen Sin a I (clone SIN5) - white mustard (fragment) C;Speciles: Sinapis aiba (white mustard) C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 16-Jul-1999 C;Accession: S65478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Experimental source: cv. Tower
C;Superfamily: wheat alpha-amylase inhibitor
C;Keywords: seed; storage protein
F;1-30/Product: napin 1 small chain (fragment) #status predicted
F;50-130/Product: napin 1 large chain #status predicted <LCH>
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Pred. No.
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            28;
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28;
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Matches

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Qy 1 CSVPLTSVC 9 |::| ||| Db 127 CNIPQVSVC 135

Search completed: June 17, 2002, 15:58:24 Job time: 193 sec

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           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2000 Compugen Ltd.
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HEM3_NEIMB
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PAZR_RABIT
YGYS_YEAST
NKGD_HUMAN
SAL_SILAS
VEGD_RAT
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ALL1_BRAJU
2SSB_BRANA
EPA2_RALSO
PI2R_HUMAN
CIKS_HUMAN
SYR_HUMAN
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Q52377 pseudomonas
P15322 sinapis alb
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2 SVPLTSVC

Query Match 82.
Best Local Similarity 100
Matches 8; Conservative

82.0%; Score 41; DB 100.0%; Pred. No. 0.7 tive 0; Mismatches

DB 1; 0.75;

Length 349; Indels

0,

Gaps

EMBL; U00039; CAB34657.1; ALT_IN EMBL; AB000423; AAC76499.1; ALT_ECOGENC; EG12220; yhhr. InterPro; IPR002549; UPF0118. Pfam; PF01594; UPF0118; 1. Hypothetical protein; Transmembranswem 11 31 POTTRANSWEM 33 53 POTTRANSWEM 143 163 POTTRANSWEM 143 163 POTTRANSWEM 143 163 POTTRANSWEM 209 229 POTTRANSWEM 235 255 POTTRANSWEM 235 255 POTTRANSWEM 235 255 POTTRANSWEM 258 278 POTTRANSWEM 258 278 POTTRANSWEM 258 278 POTTRANSWEM 258 278 POTTRANSWEM 258 313 POTTRANSWEM 259 315	entry is copyric iss Institute of oinformatics Institution ofit institution is statement is rees a license agre to license@isb	[1] SEQUENCE FROM N.A. STRAIN-K12 / MG1655; MEDLINE-94316500; PubMed-8041620; Sofia H.J., Burland V., Daniels D.L., Sofia H.J., Burland V., Daniels D.L., "Analysis of the Escherichia coli geno region from 76.0 to 81.5 minutes."; Nucleic Acids Res. 22:2576-2586(1994)!- SUBCELLULAR LOCATION: Integral men -!- SIMILARITY: BELONGS TO THE UPF0118	SULT 1  YHHT_ECOLI STANDARD; PRT; 1 p37622; P76700; 01-OCT-1994 (Rel. 30, Created) 01-NOV-1997 (Rel. 35, Last sequence uput of the correction of the correct	40 31 62.0 149 1 DISD_DICDI 41 31 62.0 216 1 NOGL_BRARE 42 31 62.0 218 1 SCOB_MYCTU 43 31 62.0 222 1 NOGL_SENLA 43 31 62.0 222 1 NOGL_SENLA 44 31 62.0 223 1 NOGG_CHICK 45 31 62.0 223 1 NOGG_CHICK	64.0 660 1 VNCS 64.0 662 1 VNCS 64.0 1115 1 IREL 64.0 1163 1 PA2R 62.0 130 1 ITRV
T. ; Complete proteome. IAL. IAL. IAL. IAL. IAL. IAL. IAL. IAL	is produced through a crmatics and the EMBL There are no restrict in g as its content is ved. Usage by and fc See http://www.isb-sib	D.L., Plunkett G. III, Blattner F.R.; li genome. V. DNA sequence of the s."; (1994). Tal membrane protein (Potential). JPF0118 (PERM) FAMILY. STRONG, TO	RT; 349 AA. ence update) tation update) subdivision; Enterobacteriaceae;	LIGNMENTS	PAVPN P18547 porcine PAVPK P52502 porcine YEAST P32361 sacchas BOVIN P49259 bos tan SINAR P38057 sinapis

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314 SVPLTSVC 321

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ID ALLI_SINAL STANDARD; PRT; 127 AA.

AC p15322;
DT 01-Apr-1990 (Rel. 14, Created)
DT 15-DEC-1998 (Rel. 37, Last sequence update)
DT 15-DEC-1998 (Rel. 37, Last annotation update)
DE Allergen Sin a 1, small and large chains (Sin a I).
OS Sinapis alba (White mustard) (Brassica hirta).
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rocalations (Sinanta).
N NCBI_TaxID-3728;
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Q52377;
15-JUL-1998
15-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RICH J.J., Kinscherf T.G., Kitten T., Willis D.K.;

Rich J.J., Kinscherf T.G., Kitten T., Willis D.K.;

Renetic evidence that the gacA gene encodes the cognate response regulator for the lemA sensor in Pseudomonas syringae.";

J. Bacteriol. 176:7468-7475(1994).

J. Bacteriol. 176:7468-7475(1994).

LOATALYZES THE EXCISION NECLEASE IS A DNA REPAIR ENZYME THAT CATALYZES THE EXCISION REACTION OF UV-DAMAGED NUCLEOTIDE SEGMENTS PRODUCING OLIGOMERS HAVING THE MODIFIED BASE(S). ATTACHES TO THE UVRA-UVRB COMPLEX, DISPLACING UVRA, AND THE DAMAGED DNA STRAND IS NICKED ON BOTH SIDES OF THE DAMAGED SITE (BY SIMILARITY).

-I- SUBGNELLULAR COCATION: CYCOPLASMIC (BY SIMILARITY).

-I- SUBCELLULAR LOCATION: CYCOPLASMIC (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence up
16-OCT-2001 (Rel. 40, Last annotation
Excinuclease ABC subunit C (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOS response; Excision nuclease; DNA repair. NON_TER 150 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF01541; Exci_endo_N; 1. SMART; SM00465; GIYC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-95095914; PubMed-8002569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000305; UvrC_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U09767; AAA65232.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pseudomonas syringae (pv.
                                                                                                                                                                                                                                                                                                  13
                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 6; Conserv
                                                                                                                                                                                                                                                                                                                                    1 CSVPLTSVC 9
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                                                                                                                                                                                                                                                                                                  CSVPASTVC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                              150
150 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              16999 MW; ACC38718B5F1E2B1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                        76.0%;
66.7%;
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gamma subdivision; Pseudomonadaceae;
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                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                        Score 38; DB Pred. No. 1.3;
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                                                               core eudicots; Rosidae;
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Best Local S
Matches 5
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ProDom; PD002498; Napin; 1.
SMART; SM00499; AAI; 1.
Allergen; Seed storage protein.
CHAIN
39
SN
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Eur. J. Biochem. 177:159-166(1988).
-!- FUNCTION: THIS IS A 28 SEED STORAGE PROTEIN
                                                                                                                                                                                              nucleotide sequence analysis that both subunits of napin are cle
from a precursor polypeptide.";
J. Mol. Appl. Genet. 2:273-283(1983).
-i- FUNCTION: THE SMALL, BASIC, WATER-SOLUBLE NAPINS ARE ONE OF
TWO MAJOR KINDS OF STORAGE PROTEINS SYNTHESIZED IN THE SEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Napin 1 precursor (1.75 seed storage protein)
            the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commendations of the content is not removed.
                                                                                                                                                                                                                                                          Crouch M.L., Tenbarge K.M., Simon A.E., Ferl R.; "cDNA clones for Brassica napus seed storage proteins: evidence from nucleotide sequence analysis that both subunits of napin are cleaved from nucleotide sequence analysis."
                                                                                                                                                                                                                                                                                                                                                                                              Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Brassica.
                                                                                                                                                                                                                                                                                                                                                                                                                               Brassica napus (Rape).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
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P01091;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Menendez-Arias L., Moneo I., Dominguez J., Rodrigue
"Primary structure of the major allergen of yellow
                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                                                                                                                                                                                                                                                                                              STRAIN=CV. TOWER;
MEDLINE=84113267; PubMed=6689334;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR003612; AAI. InterPro; IPR000617; Napin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SUBUNIT: THE PROTEIN CONSISTS OF TWO CHAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-Seed;
                                                                                                            -i- SUBUNIT: THE MATURE PROTEIN CONSISTS OF A SMALL AND A LARGE LINKED BY DISULFIDE BONDS.
-i- TISSUE SPECIFICITY: COTYLEDONS AND THE AXIS.
-i- SIMILARITY: BELONGS TO THE 2S SEED STORAGE ALBUMINS FAMILY.
                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=3708;
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S01791; S01791.
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5; Conserv
requires a license agreement (See http://www.isb-sib.ch/announce,
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Pred. No. 4.
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2S SEED STORAGE ALBUMINS FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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SEQUENCE FROM N.A.
MEDLINE-87033665; PubMed=3771543;
MEDLINE-87033665; PubMed=3771543;
      Crouch M.L., Tenbarge K.M., Simon A.E., Ferl R.;

"CDNA clones for Brassica napus seed storage proteins: evidence from nucleotide sequence analysis that both subunits of napin are cleaved from a precursor polypeptide.";

J. Mol. Appl. Genet. 2:273-283(1983).

-i- FUNCTION: THE SMALL, BASIC, WATER-SOLUBLE NAPINS ARE ONE OF THE TWO MAJOR KINDS OF STORAGE PROTEINS SYNTHESIZED IN THE SEED DURIN ITS MATURATION.

-i- SUBUNIT: THE MATURE PROTEIN CONSISTS OF A SMALL AND A LARGE CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                         Brassica napus (Rape),
Eukaryota; Viridiplantae; Streptophyta; Embryophy
Spermatophyta; Magnoliophyta; eudicotyledons; cor
eurosids II; Brassicales; Brassicaceae; Brassica.
                                                                                                                 STRAIN=CV. TOWER; MEDLINE=84113267; PubMed=6689334;
                                                                                                                                                                                                                                                                Josefsson
Submitted
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01-MAR-1989 (Rel. 10, Last sequence update)
01-MG-1992 (Rel. 23, Last annotation update)
Napin 2 precursor (1.7S seed storage protein)
                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                               precursor
                                                                                                                                                                                      "Structure of the rapeseed 1.7 S storage
                                                                                                                                                                                                                                                                                          REVISIONS
                                                                                                                                                                                                                                                                                                                            Brassica
                                                                                                                                                                                                                                                                                                                                     MEDLINE-87308224; PubMed=3624251;
Josefsson L.-G., Lenman M., Erics
"Structure of a gene encoding the
                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=3708;
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P01090;
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InterPro; IPR001768; Cereal_tryp_amyl_inh.
InterPro; IPR000617; Napin.
Pfam; PF00234; tryp_alpha_amyl; 1.
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                                                                                                                                                                                                                                                                                                               Biol.
                                                                                                                                                                  Biol. Chem. 261:14576-14581(1986)
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LINKED BY
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5; Conserv
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DISULFIDE
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yene encoding the 1.7
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49
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yta; eudicotyledons; core eu
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Pred. No. 4.4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178
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S storage protein, napin,
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Best Local
                       STRAIN-CV. TOPAS;
MEDLINE=95161697; PubMed=7858212;
Boutilier K.A., Gines M.J., Demoor J.M.,
Baszczynski C.L., Iyer V.N., Miki B.L.;
                                                                                                                                                                                   MEDLINE-91346654; PubMed=2102844; Baszczynski C.L., Fallis L; Tsolation and nucleotide sequence Brassica napus napin gene.";
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01-AUG-1990 (Rel. 15, Last seq
15-DEC-1998 (Rel. 37, Last ann
Napin precursor (1.75 seed sto
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CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Viridiplantae; Streptophyta; Embryo
Spermatophyta; Magnoliophyta; eudicotyledons;
eurosids II; Brassicales; Brassicaceae; Brass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2SS3_BRANA
P17333;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00234; tryp_alpha_amyl; PRINTS; PR00496; NAPIN.
ProDom; PD002498; Napin; 1.
SMART; SM00499; AAI; 1.
Seed storage protein; Signal; M.
                                                                                                                                                                                                                                                                                                                                                                                                              Brassica napus (Rape).
Eukaryota; Viridiplantae;
                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                  Plant Mol.
                                                                                                                                                                                                                                                                                 STRAIN=CV. WESTAR; TISSUE=Leaf;
                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=3708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR003612; AAI.
InterPro; IPR001768; Cereal_tryp_amyl_inh.
InterPro; IPR000617; Napin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIR; A01329;
PIR; A29801;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; K01545; AAA33006.1; -. EMBL; J02586; AAA32997.1; -. EMBL; J02798; AAA87348.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; A25997; A25997.
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SIMILARITY: BELONGS TO THE 2S SEED STORAGE ALBUMINS FAMILY.
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5; Conserv
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                                                                                                                                                                  Biol.
C.L., Iyer V.N., Miki B.L.; of the BnmNAP subfamily of napin genes coincides with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                14:633-635(1990).
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74
94
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20104
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55.6%;
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annotation updat
storage protein)
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S -> N (IN REF. 4);
734E561971B539FF
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LARGE CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMALL CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Multigene family.
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Mismatches
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5.9;
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RESULT 7
TYRO_NEUCR
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Best Local
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                                                                                                                                                                                                                                                                                   TYRO_NEUCR
P00440;
21-JUL-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
SEQUENCE
                                                                                                                                                                                                                                            21-JUL-1986 (Rel. 01, Created)
01-MAY-1991 (Rel. 18, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Tyrosinase precursor (EC 1.14.18.1) (Monophenol monooxygenase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plant Mol. Biol. 26:1711-1723(1994).
-I- FUNCTION: THE SMALL, BASIC, WATER-SOLUBLE NAPINS ARE ONE OF TWO MAJOR KINDS OF STORAGE PROTEINS SYNTHESIZED IN THE SEED
                                                                                                                           STRAIN=TS, AND OR;
MEDLINE=90008884; PubMed=2529259;
                                                                                                                                                                                            Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes; Sordariales; Sordariaceae; Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001768; Cereal_tryp_amyl_inh.
InterPro; IPR000617; Napin.
Iffam; PF00234; tryp_alpha_amyl; 1.
PRINTS; PR00496; NAPIN.
ProDom; PD002498; Napin; 1.
SMART; SM00499; AAI; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U04945; AAA8190
PIR; S10018; S10018.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X17542; CAA35580.1; -. EMBL; U04945; AAA81909.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         induction of Brassica microspore embryogenesis."; Plant Mol. Biol. 26:1711-1723(1994).
                                       SEQUENCE OF 1-407
STRAIN-TL;
                                                                                        Neurospora
                                                                                              Kupper U., Niedermann D.M., Travaglini 
"Isolation and characterization of the 
Neurospora crassa.":
                                                                                                                                                                                 NCBI_TaxID=5141;
                                                                                                                                                                                                                       Neurospora crassa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seed storage
                          MEDLINE-82190018; PubMed-6210696;
                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROPEP
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Primary Structure
              erch K.;
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TISSUE SPECIFICITY: COTYLEDONS AND THE AXIS.
SIMILARITY: BELONGS TO THE 2S SEED STORAGE ALBUMINS FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ITS MATURATION.
SUBUNIT: THE MATURE PROTEIN CONSISTS OF A SMALL AND A LARGE CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                               5; Conservative
                                                                            Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR003612; AAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                          crassa
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22
39
75
95
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                                                                            264:17250-17258(1989)
                                                                                                                                                                                                                                                                                                                STANDARD;
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38
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94
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                                                                                                                                                                                                                                                                                                                                                                                                                                          70.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Signal; Multigene family.
tyrosinase from Neurospora crassa.
                                                                                                                                                                                                                                                                                                                                                                                                                              Score 35;
Pred. No.
2; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LARGE CHAIN.
6F3883CBED55FB26 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMALL CHAIN
                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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                                                                                                      tyrosinase gene from
                                                                                                                  G., Lerch K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     There are no restrictions ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 180;
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 Complete
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J. Biol. Chem. 257:6414-6419(1982).
[3]
                                                                                                         CONFLICT
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METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00264; tyrosinase; 1
PRINTS; PR00092; TYROSINASE
PROSITE; PS00497; TYROSINASE
PROSITE; PS00498; TYROSINASE
                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR; A00511; YRNC.
PIR; A34460; A34460.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; M32843; AAA33619.1; -. EMBL; M33271; AAA33618.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOPAquinone + H(2)O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Comparison of amino acid sequence and thermostability of tyrosinase from three wild type strains of Neurospora crassa."; from three wild type strains of Neurospora crassa."; J. Biol. Chem. 257:6420-6426(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ruegg C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=TS, AND SING; MEDLINE=82190019; PubMed=6210697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid sequence and chemical structure of a tripeptide containing
                                                                                                                                                                                                                                                                     METAL
                                                                                                                                                                                                                                                                                                                                                                  Melanin biosynthesis;
                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR002227; Tyrosinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SIMILARITY: BELONGS TO THE TYROSINASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPOUNDS:
-i- CATALYTIC ACTIVITY: L-tyrosine + L-DOPA + O(2) =
                                                                                                                                                                                                                                                                                                                                                      Acetylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- MISCELLANEOUS: THE STRAIN TS
589 TVPLTSLC 596
                     2 SVPLTSVC 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THE FORMATION OF PIGMENTS SUCH AS
                                             Similarity 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ammer D., Lerch
                                              Conservative
                                                                                                          AΑ;
                                                                                                     4423
4423
4423
4423
68546
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TYROSINASE_2; 1.
sis; Oxidoreductase;
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                                                         70.0%;
75.0%;
                                                                                                          MW;
                                                                                                      T -> P (IN STRAIN OR).
D -> E (IN STRAIN SING).
E -> T (IN STRAIN SING).
KS -> NN (IN STRAIN SING).
I -> T (IN STRAIN SING).
K -> N (IN STRAIN OR).
K -> N (IN STRAIN OR).
N -> D (IN REF. 2 AND 3).
MW; D12A30BB6A01D312 CRC64;
                                                                                                                                                                                                                               COPPER A (BY SIMILARITY).
COPPER A (BY SIMILARITY).
COPPER A (BY SIMILARITY).
COPPER B (BY SIMILARITY).
COPPER B (BY SIMILARITY).
COPPER B (BY SIMILARITY).
                                             Score 35; DB pred. No. 20; 2; Mismatches
                                                                                                                                                                                                                                                                                                      COULD BE INV
ACETYLATION.
                                                                                                                                                                                                                                                                                                                               TYROSINASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                   BE INVOLVED
                                                                                                                                                                                                                                                                                                                                                                  Monooxygenase;
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                                                      DВ
20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IS SHOWN.
                                                                    Length 620;
                                                                                                                                                                                                                                                                                                                    IN ENZYME ACTIVATION
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                                              Gaps
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RESULT 8
ALL1\_BRAJU
ID ALL1\_BRAJU

PRT;

129

P80537; p80215; 01-OCT-1993 (Rel. 27, Created) 01-OCT-1993 (Rel. 27, Last sequence update) 01-NOV-1997 (Rel. 35, Last annotation update)

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SQUETTITIES OF THE TERMS OF THE
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Best Local
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LEPTO; IF.NOU...
LATE : LEPTO; FROUL...
LATE : LEPTO; FROUL...
LATE : LEPTO; FROUL...
LATE : LEPTO: LATE : LEPTO...
LAT
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01-AUG-1992 (Rel. 2
01-AUG-1992 (Rel. 2
16-OCT-2001 (Rel. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Allergen Bra j 1-E, small and large chains (Bra j I).
Brassica juncea (Leaf mustard) (Indian mustard).
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheor Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; eurosids II; Brassicales; Brassicaceae; Brassica.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brassica napus (Rape).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Brassica.
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                                                                                                                                                                               Ericson M.L., Muren E., Gustavsson H.O., Josefsson L.G., Rask L.; "Analysis of the promoter region of napin genes from Brassica napus demonstrates binding of nuclear protein in vitro to a conserved
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                                                                                                             sequence motif.";
Eur. J. Biochem. 197:741-746(1991)
                                                                                                                                                                                                                                                                                                    STRAIN=CV. SVALOFS KARAT 20516-K; MEDLINE=91231016; PubMed=2029903;
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   FUNCTION: THE SMALL, BASIC, WATER-SOLUBLE NAPINS ARE ONE OF THE TWO MAJOR KINDS OF STORAGE PROTEINS SYNTHESIZED IN THE SEED DUR ITS MATURATION.
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R -> K.
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01-MAR-2002 (Rel. 4
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SEQUENCE
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PIR; S15382; S15382.

InterPro; IPR003612; AAI.

InterPro; IPR003617; Napin.

Pfam; PF002344; tryp_alpha_amyl; 1.

PRINTS; PR002496; NAPIN.

PRODOM; PD002496; NAPIN.

SMART; SM00499; AAI; 1.

SMART; SM00499; AAI; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SUBUNIT: THE MATURE PROTEIN CONSISTS OF A SMALL AND A LARGE CHAIN LINKED BY DISULFIDE BONDS.
-!- TISSUE SPECIFICITY: COTYLEDONS AND THE AXIS.
-!- SIMILARITY: BELONGS TO THE 2S SEED STORAGE ALBUMINS FAMILY.
              the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in
                                                                                                                                                                                             "Molecular characterization of the eps gene cluster of Pseudomonas solanacearum and its transcriptional regulation at a single
                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                            EPS I polysaccharide export outer membrane protein epsA precursor.
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    -:- SUBCELLULAR LOCATION: Integral membrane protein. Outer membrane

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                                                                                                                                  . microbiol. 16:977-989(1995).
FUNCTION: PROBABLY INVOLVED IN POLYMERIZATION AND/OR EXPORT OF EXOPOLYSACCHARIDE EPS I WHICH FUNCTIONS AS A VIRULENCE FACTOR.
                                                                                        SIMILARITY: BELONGS TO THE BEXD/CTRA/VEXA FAMILY.
                                                                                                      (Potential).
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                                           SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
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Pred. No. 9
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PI2R_HUMAN
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Best Local
                                                                                                                                                                                           MEDLINE-95008086; PubMed-7923647; Nakagawa O., Tanaka I., Usui T., Harada M., Sasaki Y., Itoh H., Yoshimasa T., Namba T., Narumiya S., Nakao K.; "Molecular cloning of human prostacyclin receptor cDNA and its gene expression in the cardiovascular system."; Circulation 90:1643-1647(1994).
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InterPro; IPR003715; Poly_export.
InterPro; IPR003715; Poly_export.
InterPro; IPR00437; Prok_lipoprot.
Pfam; PF02563; Poly_export; 1
PROSITE; PS00013; PROKAR_LIPOPROTEIN; FALSE_NEG.
POlysaccharide transport; Transport; Outer membr
Lipoprotein; Porin; Signal.
SIGNAL
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23
POTENTIAL.
SIGNAL
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23
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MEDLINE=94216334; PubMed=7512962;
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01-NOV-1995 (Rel. 32, Last seq
16-OCT-2001 (Rel. 40, Last ann
                  "Structural organization and chromosomal assignment of the human prostacyclin receptor gene.";
                                                                  Ogawa Y., Tanaka I., Inoue M., Yoshitake Y.,
Usui T., Itoh H., Yoshimasa T., Narumiya S.,
                                                                                                                           SEQUENCE FROM N.A. MEDLINE=95394450; PubMed=7665161;
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Mammalia; Eutheria; Primates;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Cloning and expression receptor.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=94237286; PubMed=7514139;
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37:142-148(1995)
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377 AA;
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expression of a cDNA for the human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24
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55.6%;
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Last annotation update)
(Prostanoid IP receptor) (PGI receptor).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 34; DB Pred. No. 20; 2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEMBRANE PROTEIN EPSA.
N-ACYL DIGLYCERIDE (BY SIMILARITY)
BE0084252E819309 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EPS I POLYSACCHARIDE EXPORT OUTER
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20;
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                                                                                                Isse N., Nakagawa
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RESULT
CIKS_HU
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Best Local Similarity
Carches 6; Conserve
RR RN COCC
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EMBL; D25418; 
EMBL; D29634; 
EMBL; D38127; 
EMBL; D38128; 
EMBL; D38128;
                                                                                                                                                        CIKS_HUMAN STANDARD; PRT; 574 AA
043734; Q9UG72; Q9NS14;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Adapter protein CIKS (Connection to IKK and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removed. Usage by an entitles requires a license agreement (See http://www.isb-or send an email to license@isb-sib.ch).
                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                           C6ORF4
                                                                                                                                                                                                                                                                                       HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCRDb; GCR_1159; -. GCRDb; GCR_1830; -.
                                                                                                                    Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCRDb; GCR_0941; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. Thuse by non-profit institutions as long
                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRANSMEM
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PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00856; PRSTNOIDIPR.
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SUBCELLULAR LOCATION: Integral membrane protein.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: RECEPTOR FOR PROSTACYCLIN (PROSTAGLANDIN I2 OR PGI2). THE ACTIVITY OF THIS RECEPTOR IS MEDIATED BY G-S PROTEINS WHICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600022
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BAA05008.1;
BAA06110.1;
BAA07325.1;
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66.7%;
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CYTOPLASMIC (POTENTIAL)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CYTOPLASMIC (POTENTIAL).
N-LINKED (GLCNAC. .) (
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7 (POTENTIAL).
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6 (POTENTIAL
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5 (POTENTIAL).
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3 (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2B6B0CDBACED1608 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
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                                                                                                                                                          IKK and SAPK/JNK).
                                                                                                                                                                                                                                                                  574 AA
                                                                                                                                                                                  update)
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20;
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TISSUE-Liver;

SEQUENCE FROM N.A. (ISOFORM 1)

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RESULT 13
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Best Local
SYR_HUMAN
P54136;
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                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                   EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDMINE=20442403; PubMed=10962033;
Leonardi A., Chariot A., Claudio E., Cunningham K., Siebenlist U.;
"CIKS, a connection to Ikappa B kinase and stress-activated protei
kinase.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Koehrer K., Beyer A.,
Submitted (MAY-1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Uterus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Cloning and characterization of two overlapping at 6q21 involved in replicative senescence and so Gene 252:217-225(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Morelli C., Magnanini C., Mungall A.J., Negrini M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORMS 1 AND 2). MEDLINE=20363742; PubMed=10903453;
                                                                   225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-Lymph;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. (ISOFORM 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Koehrer K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. (ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Barbanti-Brodano G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (FEB-1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. Sci. U.S.A. 97:10494-10499(2000).
                                                                                                              Local Similarity
nes 6; Conserv
                                                                                        w
                                                                             3 VPLTSVC
                                                                                                                                                                                                                                    TISSUE SPECIFICITY: WIDELY EXPRESSED.
                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTERNATIVE PRODUCTS: 2 ISOFORMS; 1/C6ORF4 (SHOWN HERE) AND 2/C6ORF5/C6ORF6; ARE PRODUCED BY ALTERNATIVE SPLICING.
                                                                 LPLTSVC 231
                                                                                                                                                                      574 AA;
                                                                                                              Conservative
                                                                                                                                                                                                                           splicing.
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         STANDARD;
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334
334
347
                                                                                                                                                                      64657 MW;
                                                                                                                      68.0%;
85.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mewes H.-W., Gassenhuber J., Wieme to the EMBL/GenBank/DDBJ databases.
                                                                                                            1;
                                                                                                                                                                                                                                                           ALT_INIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL/GenBank/DDBJ
                                                                                                                                                                                MISSING (IN ISOFORM 2).
Q -> H (IN REF. 3 AND F
E -> D (IN REF. 1).
P -> S (IN REF. 2; AAF6
                                                                                                                      Score 34; DB
Pred. No. 30;
         PRT;
                                                                                                                                                                     E9857DEA5E349094 CRC64;
                                                                                                              Mismatches
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and schizophrenia.";
                                                                                                                                                                             2; AAF67447).
                                                                                                                                                                                                    AND REF. 2; AAF67445).
                                                                                                                                  Length 574;
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RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                   01-OCT-1994
01-OCT-1994
30-MAY-2000
                                                                                                                                                                SYR_CRILO P37880;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SITE
SEQUENCE
                              Arginyl-tRNA synthetase RARS OR RRS1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001278; tRNA-Synt_ld.
InterPro; IPR001412; tRNA-Synt_l.
Pfam; PF00750; tRNA-Synt_ld; 1.
PRINTS; PR01038; TRNASYNTHARG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diphosphate + L-arginyl-trna(Arg).

-! SUBUNIT: MONOMER; ALSO PART OF A MULTISUBUNIT COMPLEX THAT GROUPS TRNA LIGASES FOR ARG, ASP, GLU, ILE, LEU, LYS, MET AND PRO.
-!- SUBCELLULAR LOCATION: Cytoplasmic.
-!- DOMAIN: THE N-TERMINAL (AA 1-72) HAS TWO REGIONS PREDICTED TO BE ALPHA-HELICAL THAT MIGHT BE INVOLVED IN THE MULTISYNTHETASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
3rginyl-tRNA synthetase (EC 6.1.1.19) (Arginine--tRNA ligase) (ARGRS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; S80343; AAB35627.1;
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Girjes A.A., Hobson K., Chen P., Lavin M.F.;
"Cloning and characterization of cDNA encoding a human arginyl-tRNA
                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INIT_MET
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00178; AA_TRNA_LIGASE_I; 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- CATALYTIC ACTIVITY: ATP + L-arginine + tRNA(Arg) =
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     longicaudatus (Long-tailed
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(Rel.
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                                                                                                                                                                                            STANDARD;
                                                 30, Created)
30, Last sequence update)
39, Last annotation updathetase (EC 6.1.1.19) (Argi
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74977
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75.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FOR MONOMERIC ISOFORM (POTENTIAL).
COULD BE INVOLVED IN THE ASSEMBLY
MULTISYNTHETASE COMPLEX.
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hamster) (Chinese hamster).
                                                    (Arginine--tRNA ligase) (ARGRS).
                                                                             update)
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Best Local
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lazard M., Mirande M.;
"Cloning and analysis of a cDNA encoding mammalian arginyl-tRNA synthetase, a component of the multisynthetase complex with a hydrophobic N-terminal extension.";
Gene 132:237-245(1993).
                                            GATC_RICCN STANDARD; PRT; 100 AA. 092J74; 092J74; 01-MAR-2002 (Rel. 41, Created) 01-MAR-2002 (Rel. 41, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation update) Glutamyl-trna(Gln) amidotransferase subunit C
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X63415; CAA450
PIR; JN0870; JN0870.
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  subunit C).
GATC OR P.0195
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001278; tRNA-synt_1d.
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                                                                                                                                                                                                                                                                                                                                                                                                     1 CSVPLTSV 8
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SUBUNIT: MONOMER; ALSO PART OF A MULTISUBUNIT COMPLEX THAT GROUPS TRNA LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LEU, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LYS, MET AND PROTRING LIGASES FOR ARG, ASP, GLU, GLN, ILE, LYS, MET AND PROTRING LIGASES FOR ARGADANCE FOR ARGADANCE FOR ARGADANCE FOR ARGADANCE FOR ARGADANCE FOR ARGADANCE FOR ARGADANC 
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ALTERNATIVE PRODUCTS: THE USE OF ALTERNATIVE INITIATION CODONS IN THE SAME READING FRAME MAY GIVE RISE TO A COMPLEXED AND A FREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: BELONGS TO CLASS-I AMINOACYL-TRNA SYNTHETASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN: THE N-TERMINAL (AA 1-73) HAS TWO REGIONS PREDICTED TO ALPHA-HELICAL THAT MIGHT BE INVOLVED IN THE MULTISYNTHETASE
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73
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75.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FOR MONOMERIC ISOFORM (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "HIGH" REGION.
12EB1C85655EB8F4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MULTISYNTHETASE COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ISOFORM (POTENTIAL)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ARGINYL-TRNA SYNTHETASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                             (EC 6.3.5.-) (Glu-ADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 661;
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Search completed: June
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                                                                                                                                                                       EMBL; AE008587; AAL02733.1; ALT_INIT.
Protein biosynthesis; Ligase; Complete proteome.
SEQUENCE 100 AA; 11321 MW; 41BF2C04E7346100 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ogata H., Audic S., Samson D., Roux V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=21442074; PubMed=11557893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Proteobacteria; alpha subdivision; Rickettsiales; Rickettsiaceae; Rickettsieae; Rickettsia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=781;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Mechanisms of evolution in Rickettsia conorii and R. prowazekii.";
                                                                                                       Local Similarity
nes 6; Conserv
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                                                     PLTSVC
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                                                                                                          Conservative
  17,
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100.0%;
                                                                                                          0;
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Pred. No.
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sp_plant:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

16	15	14	13	12	11	10	9	00	7	σ	U	4	ω	N	μ.	No. S
36	36	36	36	37	37	38	38	39	41	41	41	41	41	41	43	Score
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247	201	168	124	1929	718	786	491	432	784	781	780	750	750	409	1487	Match Length DB
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Q9BXN2	Q9H1K3	Q96PA7	Q9D179	Q9V6A0	Q94JF5	Q9H747	Q9H6R1	Q58874	Q9LG04	Q9ARM3	Q9ARF2	Q9ARC6	Q9ARC9	Q63791	Q62028	ID
homo	Q9h1k3 homo sapien	Q96pa7 homo sapien	Q9d179 mus musculu	Q9v6a0 drosophila	Q94jf5 oryza sativ	Q9h747 homo sapien	Q9h6rl homo sapien	Q58874 methanococc	Q91g04 arabidopsis	Q9arm3 arabidopsis	Q9arf2 capsella ru	Q9arc6 lycopersico	Q9arc9 lycopersico	Q63791 rattus sp.	Q62028 mus musculu	Description

45	44	٠ ۲ م	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
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68.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0		70.0		70.0		70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	72.0	72.0	72.0
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10	11	<u>.</u> .	<del>-</del> م	4	6	10	10	10	10	10	10	տ	10				10	10	10	16	10	10	10	10	5	4	10
Q989E5	090019	TEODY	Q9MZJ7	043198	Q9MZJ6	Q42469	Q96339	Q39344	Q42491	Q42490	Q42413	Q9NL63	Q41167	018Z6D	Q41280	Q41279	Q41278	Q41281	P80208	Q97HY9	Q9S9E7	Q9S9E8	Q9S9E9	Q9S9F0	001768	Q9ULL5	Q39485
bra	O9dOi9 mus musculu	Druge S		homo s	=		brassica	Q39344 brassica na	brassica	brassica		sarcophaga	~	treptom	sinapis	sinapis		sinapis a	P80208 brassica na	Q97hy9 clostridium	brassica		brassica	0	001768 caenorhabdi	Q9ull5 homo sapien	Q39485 chlamydomon

### ALIGNMENTS

· W	DR DR	DR R	DR	DR	DR	DR	DR:	ב ק	DR	DR	DR	DR	DR	DR	DR	RL	RT	RT	RA	ЯX	RP	RN	o X	8	2 8	) e	DE	DT	DΤ	DT	AC	ij	RESULT
;	PS00023;	PS50041;	SM00458; RICIN; 1.	SM00059; FN2; 1.	SM00034; CLECT; 8.	PD000995;	S: PROCOLS: FNTYPETI.	Pfam: PF00652: Ricin B lectin: 1	PF00040; fn2; 1	Pro; IPR000772;	IPR001304;	Pro; IPR000562;	MGI:10246	P02751;		82(1994).	from various mammals.";	ipase-A2-binding regi		စ	SEQUENCE FROM N.A.	[1]	)=10090;	Rodentia; Sciuroqnathi; Muridae;	Rukarvota: Metazoa: Chordata: Craniata: Vertebrata: Ruteleogtomi:	(Moneo)	PHOSPHOLIPASE A2 RECEPTOR PRECURSOR.	(TrEMBLrel. 19, Last annotation	(TrEMBLrel. 01,	01-NOV-1996 (TrEMBLrel. 01, Created)		062028 PRELIMINARY; PRT; 1487 AA.	JLT 1

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1 CSVPLTSVC 9

Query Match Best Local : Matches

Similarity 7; Conserv

Conservative

86.0%; 77.8%;

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929 CSVPLPSIC 937

SO

SIGNAL CHAIN SEQUENCE

1 27 1487

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O9ARC9;
01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-OCT-2001 (TrEMBLrel. 18, Last annotation update)
HYPOTHETICAL 80.0 KDA PROTEIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-95010128; PubMed-7925459;
H19ashino K., Ishlzaki J., Kishino J., Ohara O., Arita H.;
"Structural comparison of phospholipase-A2-binding regions in phospholipase-E2 receptors from various mammals.";
Eur. J. Biochem. 225:375-382(1994).
EMBL; D30781; BAA06445.1; -.
HSSP; P23807; IIXX.
InterPro; IPR001304; lectin_c.
Pfam; PF00059; lectin_c; 3.
SMART; SM00034; CLECT; 3.
SEQUENCE FROM N.A.
MEDLINE-21178822; PubMed-11283350;
Rossberg M., Theres K., Acarkan A.
Schumacher K., Schmitz G., Schmidt
                                                                                                                                                                                          Lycopersicon esculentum (Tomato).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheo Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
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170511 M
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66.7%;
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3., Schmidt
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PHOSPHOLIPASE A2 RECEPTOR
PHOSPHOLIPASE A2 RECEPTOR
MW; AD8D905859B0EDE8 CRC6/
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Pred. No.
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Sciurognathi;
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1.3;
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                                            Schmitt T.,
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Best Local S
Matches 8
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Best Local :
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InterPro; IPR001807; Volt_Cl_
Pfam; PP00571; CBS; 2.
Pfam; PF00654; voltage_CLC; 1
PRINTS; PR00762; CLCHANNEL.
SMART; SM00116; CBS; 2.
Hypothetical protein.
SEQUENCE 750 AA; 79985 MW;
         Q9ARF2;
Q9ARF2;
01-JUN-2001
01-JUN-2001
01-OCT-2001
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Q9ARC6;
Q9ARC6;
Q1-JUN-2001 (TrEMBLrel. 17, Created)
Q1-JUN-2001 (TrEMBLrel. 17, Last seq)
Q1-OCT-2001 (TrEMBLrel. 18, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Comparative sequence analysis reveals extensive microcolinearity the Lateral supressor regions of the tomato, Arabidopsis and Capse genomes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lycopersicon esculentum (Tomato).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;

Asteridae; euasterids I; Solanales; Solanaceae; Solanum.
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SEQUENCE 750 AA; 79994 MW; 400448EB3D37042C CRC64;
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Interpro; IPR001807; Volt_Cl_channel.
Pfam; PF00571; CBS; 2.
Pfam; PF005654; Voltage_CLC; 1.
PRINTS; PR00762; CLCHANNEL.
SMART; SM00116; CBS; 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rossberg M., Theres K., Acarkan A., F
Schumacher K., Schmitz G., Schmidt R.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plant Cell 13:979-988(2001).
EMBL; AJ303345; CAC36403.1;
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SEQUENCE FROM N.A. TISSUE-SMOOTH MUSCLE;

NCBI\_TaxID=10118;

Rattus sp.

RESULTATION OF THE PROPERTY OF

NCBI\_TaxID=4081;

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1 CSVPLTSVC

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Matches Query Match Best Local

Similarity 6; Conserv

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REPORTED TO SERVICE TO
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EMBL; AJ303349; CAC36391.1; -.

InterPro; IPR000644; CBS.

InterPro; IPR001807; Volt_Cl_che

Pfam; PF00571; CBS; 2.

Pfam; PF00554; Voltage_CLC; 1.
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01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
01-DEC-2001 (TREMBLREL. 19, Last annotation update)
HYPOTHETICAL 83.5 KDA PROTEIN (CLC-F CHLORIDE CHANNEL PROTEIN).
                                                                       Vinauger-Douard M., Charon C., Lapous D., Allot M., Granier F., Bouchez D., Barbier-Brygoo H., Ephritikhine G.;

"Molecular and functional characterization of AtCLC-f, a putati Arabidopsis chloride channel.";

Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AJ303348; CAC35386.1; -.

EMBL; AF366368; AAK53391.1; -.

EMBL; AF366368; AAK53391.1; -.

InterPro; IPR000644; CBS.

InterPro; IPR000644; CBS.

InterPro; IPR000571; CBS; 2.

Pfam; PF00571; CBS; 2.

Pfam; PF00554; Voltage_CLC; 1.
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosid
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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SMART; SM00116; CBS; 2.
Hypothetical protein.
SEQUENCE 780 AA; 83811 M
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rossberg M., Theres K., Acarkan A., He Schumacher K., Schmitz G., Schmidt R.;
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MEDLINE-21178822; PubMed-11283350;
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                                                 PRINTS;
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Pred. No.
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Q9LG04;
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SEQUENCE FROM N.A.
SHINN P.P., Buehler E.E., Dunn P.P., Feng J.J., Kim C.C., Li Y.Y.
Walker M.M., Altafi H.H., Araujo R.R., Conn L.L., Conway A.A.B.,
Walker M.M., Altafi H.H., Araujo R.R., Conn L.L., Kremenetskaia I.I.,
Gonzalez A.A., Hansen N.N.F., Huizar L.L., Kremenetskaia I.I.,
Gonzalez A.A., Hansen N.N.F., Huizar L.L., Kremenetskaia I.I.,
Lenz C.C., Li J.J., Liu S.S., Luros S.S., Rowley D.D., Schwartz (
Toriumi M.M., Vysotskaia V.V., Yu G.G., Davis R.R.W.,
Frederspiel N.N.A., Theologis A.A., Ecker J.J.R.;
Frederspiel N.N.A., Theologis A.A., Ecker J.J.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical protein SEQUENCE 781 AA; (
Cheuk R., Shinn P., Brooks S., Buehler E., Chao Q., Johnson-Hopso Khan S., Kim C., Altafi H., Bei B., Chin C., Chiou J., Choi E., Conn L., Conway A., Gonzalez A., Hansen N., Howing B., Koo T., Lae J., Lenz C., Li J., Liu A., Liu J., Liu S., Mukharsky N., Myuyen M., Palm C., Pham P., Sakano H., Schwartz J., Southwick A. Thaveri A., Toriumi M., Vaysberg M., Yu G., Davis R., Federspiel Theologis A., Ecker J.; Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AC002328; AAF79509.1; TinterPro; IPR001807; Volt_Cl_channel. PF00571; CBS; 2.
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Khan S., Brooks S., Buehler E., Chao Q., Johnson-Hopson C., Kim C., Khan S., Brooks S., Bei Q., Chin C., Chiou J., Choi E., Conn L., Shinn P., Altafi H., Bei Q., Chin C., Chiou J., Choi E., Conn L., Conway A., Gonzales A., Hansen N., Howng B., Koo T., Lam B., Lee J., Lenz C., Liu A., Liu K., Liu S., Mukharsky N., Nguyen M., Palm C., Pham P., Sakano H., Schwartz J., Southwick A., Thaveri A., Poriumi M., Vaysberg M., Yu G., Federspiel N.A., Theologis A.,
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Pred. No.
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Q58874;
Q58874;
01-AUG-1998 (TrEMBLrel. 0
01-AUG-1998 (TrEMBLrel. 0
01-DEC-2001 (TrEMBLrel. 1
                     Q9H6R1 PRELIMINARY; PRT; 491 AA. Q9H6R1; Q9H6R1; 16, Created) 01-MAR-2001 (TrEMBLrel. 16, Last sequence up 01-MAR-2001 (TrEMBLrel. 16, Last annotation CDNA: FtJ21969 FIS, CLONE HEP05692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-JAL-1 / DSM 2661 / ATCC 43067;

MEDLINE-96337999; PubMed-9688087;

Bult C.J., White O., Olsen G.J., Zhou L., Fleischmann R.D.,

Sutton G.G., Blake J.A., Fitzgerald L.M., Clayton R.A., Gocayne J.D.,

Kerlavage A.R., Dougherty B.A., Tomb J.F., Adams M.D., Reich C.I.,

Overbeek R., Kirkness E.F., Welnstock K.G., Merrick J.M., Glodek A.,

Scott J.L., Geoghagen N.S.M., Weidman J.F., Fuhrmann J.L., Nguyen D.,

Utterback T.R., Kelley J.M., Peterson J.D., Sadow P.W., Hanna M.C.,

Cotton M.D., Roberts K.M., Hurst M.A., Kaine B.P., Borodovsky M.,

Klenk H.-P., Fraser C.M., Smith H.O., Woese C.R., Venter J.C.;

"Complete genome sequence of the methanogenic archaeon, Methanococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: TO E.COLI HYPOTHETICAL 45.5 KDA PROTEIN IN LRHA 3'REGION, H.INFLUENZAE HI0286 AND M.TUBERCULOSIS MTCY279.04C. EMBL; U67589; AAB99491.1; -. TIGR; MJ1479; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001511; Aminotran_1.
InterPro; IPR000529; Ribosomal_S6.
Pfam; PF00155; aminotran_1_2; 1.
PROSITE: PS01048; RIBOSOMAL_S6; UNKNOWN_1.
Hypothetical protein; Complete proteome.
SEQUENCE 432 AA; 49429 MW; 14D1602E32DI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      jannaschii.";
Science 273:1058-1073(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-AUG-1998 (TrEMBLrel. 07, 01-AUG-1998 (TrEMBLrel. 07, 01-DEC-2001 (TrEMBLrel. 19, HYPOTHETICAL PROTEIN MJ1479)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00654; voltage_CLC;
PRINTS; PR00762; CLCHANNEL.
SMART; SM00116; CBS; 2.
SEQUENCE 784 AA; 83614 MP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Methanococcus
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sapiens
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8; Conser
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  (Human).
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77.8%;
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Pred. No.
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14D1602E32DB31FE CRC64;
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Q94JF5;
01-DEC-2001 (TrEMBLre
01-DEC-2001 (TrEMBLre
01-DEC-2001 (TrEMBLre
01-DEC-2001 (TrEMBLre
P0684B02.13 PROTEIN.
P0684B02.13.
Spermatophyta; Magnoliophyta; Ehrhartoideae; Oryzeae; Oryza NCBI_TaxID=4530;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kawabata A., Hikiji T., Kobatake N., Inagaki H., Okitani R., Ota T., Suzuki Y., Obayashi M., Nishi Tanaka T., Nakamura Y., Isogai T., Sugano S.; "NEDO human CDNA sequencing project."; Submitted (AUG-2000) to the EMBL/GenBank/DDBJ dat EMBL, AKO2500; BABI551.1; -. InterPro: IPR000834; Zn_CarbOpept. PROSITE; PS00133; CARBOXYPETZN_2; UNKNOWN_1. SEQUENCE 786 AA; 87893 MW; 958D17DD68B321C2 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9H747;
01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CDNA: FLJ21347 FIS, CLONE COL02724.
                                                                                          Oryza sativa (Rice).
Eukaryota; Viridiplantae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases
EMBL; AK025622; BAB15192.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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6; Conser
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66.7%;
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66.7%;
                                                                                            Streptophyta; Embryophyta; Tracheophyta;
                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 38; DB Pred. No. 24; 1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Okamoto S.,
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RESULT
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RX MEDLINE-2019606; PubMed-10731132;
RX Adams M.D. (Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Andams M.D. (Celniker S.E., Li P.W., Hoskins R.A., Galle R.E., Reorge R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., RA George R.G., Wortman J.R., Yandell M.D., Zihang Q., Chen L.X., Man K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., RA Hardin J.F., Aphayani A., An H. -J., Andrews Pfannkoch C., Baldwin D., Ra Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M., RA Berson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., RA Berson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Botchier P., Davies P., Dahlke C., Davenport L.B., Davies P., RA Burtis K.C., Busam D.A., Butler H., Gadieu E., Center A., Chandra I., Ra Geblos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M., Dodoson K., Doup L.E., Downes M., Dugan Rocha S., Dunkov B.C., Dunn P., RA Dodson K., Doup L.E., Downes M., Dugan Rocha S., Dunkov B.C., Dunn P., RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., Glasser K., Gloder C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., Ra Hostin D., Heiman T.J., Hernandez J.R., Houck J., RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., RA Kilmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Liang Y., Liin X., Li X., Lix, M. Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., RA Kilmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Liang Y., Liin X., Li X., Mattel B., McIntosh T.C., McLeed M.P., McShrefi A., McShrefi D.R., McShrefi D.R., McShrefi D.R., Sten B., Shon H., Strong R., Sun E., Span H., Wang X., Wang A., H., Wang X., Wang 
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"Oryza sativa nipponbare(GA3) genomic DNA, chromosome 1,
clone:P0684B02.";
Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AP003023; BAB44026.1; -
SEQUENCE 718 AA; 76362 MW; DAB54F202012785B CRC64;
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ilidae; Drosophila.
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RC STRAIN=C57BL/6J; TISSUE=EMBRYO;

RX MEDLINE=2108560; PubMed=11217851;

RA ARAMAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

RA Kudhl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kubhl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

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RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

RA Schai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

RA Blake J., Bolt C., Fletcher C., Fujita M., Gariboldi M.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Sazaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

RA Havashizaki Y..
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MGD; MGI:
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Q9D179;
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EMBL; AE003822; AAF58528.1; -.
FlyBase; FBgn0033718; CG13162.
SEQUENCE 1929 AA; 219961 MW; A409187CC6AECA66
                                                                                                                                                                                                                                                                                                                                "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
EMBL; AK003851; BAB23036.1; -.
MGD; MGI:1915834; 1110020C17Rik.
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Q9H1K3;
Q1-MAR-2001 (TremBLrel. 16, Created)
Q1-JUN-2001 (TremBLrel. 17, Last sequence update)
Q1-DEC-2001 (TremBLrel. 19, Last annotation update)
PUTATIVE TRANSMEMBANE PROTEIN DECTIN-1 (DENDRITIC CELL-ASSOCIATED
TYPE LECTIN-1 BETA) (DECTIN-1 RECEPTOR) (LECTIN-LIKE RECEPTOR 1B)
(BETA-GLUCAN RECEPTOR ISOPORM B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Willment J.A., Gordon S., Brown G.D.;
"Characterization of the human beta-glucan receptor alternatively spliced isoforms.";
J. Biol. Chem. 0:0-0(2001).
EMBL, AF400599; AALI1715.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grunebach F., Brugger W., Kanz L., Brossart P.;
"Identification of the human dendritic-cell-associated molecule,
hDectin-1, by cDNA subtraction and Rapid Amplification of cDNA Ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-DEC-2001 (TrEMBLrel. 19, Last annotation update) BETA-GLUCAN RECEPTOR ISOFORM E.
                                                                                                                                                                                                                                                                                                                 "A novel cluster of lectin-like receptor genes expressed in monocytic, dendritic and endothelial cells maps close to the NK receptor genes in the human NK gene complex.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yokota K., Takashima A., Bergstresser P.R., Ariizumi K.; "Identification of a Human Homolog of the Dendritic Cell-associated type Lectin-1, Dectin-1."; Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9H1K3
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                                                                                     Hermanz-Falcon P., Arce I., Roda-Navarro P., "Cloning of human DECTIN-1, a novel C-type 1 expressed on dendritic cells."; Immusogenetics 53:288-295(2001).
                                                                                                                                                                                                                                                                                          Submitted (JUL-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                    Sobanov Y., Bernreiter A., Derdak S., Kalthoff F., Hofer E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (RACE)."
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Herranz Falcon P.,
                                                                                                                                                                                                    MEDLINE=21383615; PubMed=11491532;
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                                SEQUENCE FROM N.A.
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nes 6; Conserv
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        Fernandez-Ruiz
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Pred. No. 15;
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Вb
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Best Local
                                               Matches
                                                                                                                                                                            "Characterization of the human beta-glucan receptor and alternatively spliced isoforms.";
J. Biol. Chem. 0:0-0(2001).

EMBL; AV009090; AAG3923.2;
EMBL; AF313469; AAK37474.1;
EMBL; AJ312372; CAC43846.1;
EMBL; AJ312372; CAC43846.1;
EMBL; AV026770; AAK20115.1;
EMBL; AV026770; AAK20115.1;
InterPro; IPR002353; AntifreezeII.
InterPro; IPR001304; lectin_c.
                                                                                                         Transmembrane; SEQUENCE 201
                                                                                                                                  Pfam; PF00059; lectin_c; 1.
PRINTS; PR00356; ANTIFREEZEII.
SMART; SM00034; C_ECT; 1.
PROSITE; PS50041; C_TYPE_LECTIN_2; 1.
                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
TISSUE-PERIPHERAL BLOOD LEUKOCYTE;
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 187
            1 CSVPLTSVC 9
CSVPSYSIC 195
                                               Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                         (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                               Conservative
                                                                                                           Lectin; Receptor AA; 22563 MW; (
                                                           72.0%;
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Search completed: June 17, 2002, 16:23:40 Job time: 1614 sec

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Minimum
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Copyright (c) 1993 - 2000 Compugen Ltd
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                                                                                                                                                                                                                                                                              Description
                                              Propionibacterium
                                                                 Novel human diagno
Human protease and
Human gene 13 enco
                                                                                                                                                              Propionibacterium
                                                                                                                                                                                  VEGF based monocyc
Murine phospholipa
Propionibacterium
                   Drosophila melanog
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Propionibacterium	AAU66174	22	59	9	34.5	
Amino acid sequenc	AAY68739	21	464	0	35	
Human prostate can	AAB57054	21	2	70.0	35	
Human mast cell fu	AAE11759	22	8	0	35	
Human mast cell fu	AAW88265	20	8	0	35	
Albumin-type prote	AAR33390	14	175		35	
Propionibacterium	AAU57063	22	157	70.0	35	
fusion	AAB10663	21	137	0	35	
-	AAB10661	21	137	0	35	
#1419	AAM02737	22	77	0	35	
-	AAM27446	22	77	0	35	
Peptide #1443 enco	AAM15009	22	77	70.0	35	
bone n	AAM67144	22	77	0	35	
Human brain expres	AAM54755	22	77	0	35	
#1429	ABB19430	22	77	0	<b>ω</b>	
-	ABB33992	22	77	0	35	
#1456	ABB28805	22	77	0	35	
	AAM06633	22	54	0	35	
human	ABG09876	22	1217	2.	36	
ORFX O	AAB42321	21	900	72.0	36	
Hepatitis C virus	AAR63377	15	489	2	36	
Human DC3' protein	AAW73889	20	247	۲.	36	
Human SDCMP4 polyp	AAY27448	20	247	72.0	36	
Human PRO polypept	AAU29077	22	201	2	36	
Human PRO1082 (UNQ	AAB44320	21	201	.2	36	
DC3 prot	AAW73888	20	201		36	
N	AAY41764	20	201		36	
	AAY27449	20	201	72.0	36	
Human C-type lecti	AAW52837	19	201	٢	36	
Novel human neopla		22	133		36	
_	967	22	133	72.0	36	
polypeptic	349	22	133		36	
endocrine	18	22	133	•	36	
Human cDNA SEQ ID	ABB10143	22	133	72.0	36	

### ALIGNMENTS

AAU04529 standard; Peptide; 9 AA

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RESULT
AAU04529
ID AAU0
XX AAU0
XX AAU0
XX AAU0
XX AAU0
XX VEGF
XX Huma
KW Incov
KW diab
XX Synt
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                                              Achen MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VEGF based monocyclic peptide 7.
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                                                                                                                                                                                                                       18-JAN-2000;
16-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200152875-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disulfide-bond
                                                                                                                                  (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                              18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-JUL-2001.
                                          Hughes RA,
                                                                                                                                                                                                                       2000US-0176293.
2000US-0204590.
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                                              Stacker S,
                                              Cendron A;
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ACC XXX ACC XX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CC whose 3-dimensional structure is modelled on the expose loop of human CC VEGFD (vascular endothelial growth factor). The invention relates to a CC method of producing a monomeric monocyclic peptide by a measuring CC beta-beta carbon separation distances on opposite antiparallel strands of CC and cyclising the peptide by oxidising the cysteine residues. The CC monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked CC deleted prior to cyclisation are used to interfere with angiogenesis, CC neovascularisation or lymphangiogenesis in a mammal with a condition CC The condition is diabetic retinopathy, psoriasis, arthropathy, CC hemangioma, vascularised nealignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or clared trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver cin a mammal (the mammal has a condition characterised by fluid CC accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, cor brain. The peptides are used to modulate vascular permeability in the least one biological activity induced by EggF, VegF, or D and are also used in combination with an anti-inflammatory agent, to treat a cc chronic inflammation, especially rheumatoid arthritis, psoriasis and cc diabetto retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 9
                                                              24-APR-1996;
24-APR-1996;
                                                                                                                                                         24-APR-1997;
                                                                                                                                                                                                                       12-SEP-2000
                                                                                                                                                                                                                                                                                  US6117977-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Murine phospholipase A2 receptor protein SEQ ID NO:7.
(GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                    Endocytic C lectin family; E-selectin; type C lectin; identification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB23826 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diabetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequence represents a monomeric monocyclic peptide of the whose 3-dimensional structure is modelled on the expose loop c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 49; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel monomeric monocyclic peptide, used to interfere with anglogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CSVPLTSVC 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-442248/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the cysteine residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                              95US-0052524.
95US-0637021.
                                                                                                                                                         97US-0840062.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 50; DE
Pred. No. 6.4
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.4e+05;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         invention,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or cold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
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RESULT
AAU63687
        Вþ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes an isolated type C lectin polypeptide CC (I) comprising amino acid residues 37-1393, 37-174, 175-229, 234-360, 2381-507, 520-645, 667-809, 824-951, 970-1108, 1110-1243, or 1259-1393 CC apable of binding to a carbohydrate residue, and the rest of the polypeptides are useful for producing antibodies capable of binding to a carbohydrate residue, and the rest of the polypeptides. Polynucleotide sequence encoding the polypeptides of their native ligands, and as molecular markers of the tissues in which can be inserted or substituted into other native members of the endocytic type C lectins, and provide hybridisation probes for searching cDNA and genomic libraries for the coding sequence of other type C lectins. The present sequence represents a murine phospholipase A2 receptor to protein which is homologous to a type C lectin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                      21-APR-2000;
02-JUN-2000;
07-JUL-2000;
      Skeiky YAW, I
L'maisonneuve
                                                                                                                                                                                                                              SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; EIISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New type C lectin protein having a signal sequence, cystel domain, fibronectin type II domain, 8 type C lectin domain transmembrane domain and a short cytoplasmic domain, used markers and hybridization probes -
                                             (CORI-) CORIXA CORP
                                                                                                                           20-APR-2001;
                                                                                                                                                                              WO200181581-A2
                                                                                                                                                                                                       Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                Propionibacterium
                                                                                                                                                                                                                                                                                                                         27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                   AAU63687;
                                                                                                                                                                                                                                                                                                                                                                           AAU63687 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1487 AA;
     Persing DH,
ve J, Zhang
                                                                    ; 2000US-199047P.
; 2000US-208841P.
; 2000US-216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                          2001WO-US12865
                                                                                                                                                                                                                                                                                                                                                                                                                                            937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                               acnes immunogenic protein #24583.
                                                                                                                                                                                                                                                                                                                                                                             Protein;
                   ĎΗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86.0%;
77.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English.
Mitcham JL, waus
                                                                                                                                                                                                                                                                                                                                                                             73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 43;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                   Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
61;
                 ss,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1487;
                   Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cysteine-rich domains, used as molecular
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RESULT

AAU5327

ID AAU5

XX AAU5

XX AAU5

XX AAU5

XX Prop

XX SAPH

KW UV61

KW UV61

KW U020

XX Prop

XX Prop

XX Prop

XX OI-N

XX O20-A

XX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis.

P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes porteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by concern linked immunosorbent assay (ELISA).

Note: The sequence data for this patent did not form part of the printed as the print of the printed and the properties of the printed as the print of the printed and the print of the pri
                                                                                                                                                  21-APR-2000;
02-JUN-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
       Skeiky YAW,
                                                                           (CORI-) CORIXA
                                                                                                                                                                                                                                                                                                             20-APR-2001; 2001WO-US12865
                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200181581-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Propionibacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dermatological; osteopathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Propionibacterium acnes immunogenic protein #14173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU53277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU53277 standard; Protein; 88 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; SEQ ID No 24882; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e treatment, prevention and diagnosis of medical conditions caused acnes. The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ftp.wipo.int/pub/published_pct_sequences
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                                                                                                                                                  ; 2000US-199047P.
; 2000US-208841P.
; 2000US-216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
   Persing DH,
                                                                               CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acnes.
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       Mitcham
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Pred. No. 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
   JL,
Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
       ss,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
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       Bhatia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        part of the printed directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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CC Note: The sequence data for this patient did not form part of the printed constitution, but was obtained in electronic format directly from WIPO CC at figure interpretation of antibodies can be used as constitution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                       21-APR-2000;
02-JUN-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         uveitis; endophthalmitis; bone;
                                                                                                                                                                                                                                                                                          Propionibacterium acnes immunogenic protein #4790
                                                                                                                                                                                                                                                                                                                          13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                      AAU43894;
                                                                                                                                                                                                                                                                                                                                                                                AAU43894 standard; Protein; 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L'maisonneuve J,
                                                                                                  20-APR-2001;
                                                                                                                               01-NOV-2001
                                                                                                                                                            WO200181581-A2
                                                                                                                                                                                      Propionibacterium
                                                                                                                                                                                                                   dermatological;
                                                                                                                                                                                                                                                              SAPHO syndrome;
                                                                                                                                                                                                                                 inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           43
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                                       2000US-199047P.
2000US-208841P.
2000US-216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                  2001WO-US12865
                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         51
                                                                                                                                                                                                                   osteopathic;
                                                                                                                                                                                                                                                              synovitis; acne;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang
                                                                                                                                                                                        acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78.0%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14472;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1069pp; English
                                                                                                                                                                                                                   neuroprotectant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 39;
Pred. No.
                                                                                                                                                                                                                                             joint; central nervous system;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                              pustulosis; hypertosis; osteomyelitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 88;
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CORIXA CORP

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RESULT
ABG11475
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA).

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelliis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central
                          Drmanac
                                                                 (HYSE-) HYSEQ INC
                                                                                                           31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                      30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                 11-OCT-2001.
                                                                                                                                                                                                                                                         WO200175067-A2
                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                     Human; chromosome mapping; gene ma
food supplement; medical imaging;
                                                                                                                                                                                                                                                                                                                                                                                                    Novel human diagnostic protein #11466.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABG11475;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABG11475 standard; Protein; 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; SEQ ID No 5089; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 treating acne vulgaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L'maisonneuve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |::||| ||
cnlpltlvc 24
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                        RT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 66.7
6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                        Liu C,
                                                                                                        2000US-0540217
2000US-0649167
                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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e J, Zhang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
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66.7%;
                        Tang
                        ΥT
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, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                       gene mapping; gene therapy;
maging; diagnostic; genetic c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 38; DB Pred. No. 31; 2; Mismatches
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31;
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Best Local Similarity
""" 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB74693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC polypeptide (II) sequences. (I) is useful as hybridisation probes, complymerase chain reaction (PCR) primers, oligomers, and for chromosome cc and gene mapping, and in recombinant production of (II). The complymerase chain reaction (PCR) primers, oligomers, and for chromosome cc and gene mapping, and in recombinant production of (II). The complymerased series are also used in diagnostics as expressed sequence tags (C for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or c quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating cd disorders involving aberrant protesh expression or biological activity. (I) and (II) are useful for treating cd disorders involving aberrant protesh exquences have applications in c diagnostics, forensics, gene mapping, identification of mutations in c responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and call acquences. ABG00010-ABG30377 represent novel human c diagnostic amino acid sequences of the invention.

CNOTE: The sequence data for this patent did not appear in the printed conscription of the p
                                                                                                                                                                                                                                                                                       Human; protease; protease inhibitor; protease and protease inhibitor; PPIM; identification; diagnosis; anti-human immunodeficiency virus; HIV; antidiabetic; immunostimulant; immunomodulator; antiinflammatory; antithyroid; immunosuppressive; nephrotropic; antigout; thyromimetic; cytostatic; antibacterial; fungicide; protozoacide; antiarteriosclerotic;
                                                                                                                                       Cushing's disease; Addison's disease; autoimmune thyroiditis; gout; Crohn's disease; diabetes mellitus; Good pasture's syndrome; infection; Grave's diseases; Hashimoto's thyroiditis; Sjogren's syndrome; cancer; Werner's syndrome; cell proliferative disorder; arteriosclerosis;
                                                                                                                                                                                                                      antiatherosclerotic; antipsoriatic; virucide; hepatotropic; gene therapy; autoimmune disorder; inflammatory disorder; AIDS; DiGeorge's syndrome; severe combined immunodeficiency disease; SCID; Chediak-Higashi syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
15-FEB-2001
                                         WO200110903-A2
                                                                                Homo
                                                                                                                        atherosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                    Human protease and protease inhibitor PPIM-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB74693 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 20; SEQ ID No 41834; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-639362/73.
N-PSDB; AAS75662.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       209 csvpitdpc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CSVPLTSVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
                                                                              sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       217
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA,
                                                                                                                        cirrhosis; hepatitis; psoriasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein; 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76.0%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       рв
67;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 225;
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Gaps

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RESULT
AAE017
      Вр
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF81714 to AAF81740 encode the human proteases and protease inhibitors (PPIMS) given in AAB74668 to AAB74694. The PPIMS can have activities such as: anti-human immunodeficiency virus (HIV); antidiabetic; antithyroid; immunostimulant; immunomodulator; antiinflammatory; immunosuppressive; cc nephrotropic; antigout; thyromimetic; cytostatic; antiabeterial; cfungicide; protozoacide; antiarteriosclerotic; antiabherosclerotic; cvirucide; antipsoriatic; and hepatotropic. PPIM polynucleotide and prevention of autoimmune/inflammatory disorders such as AIDS, DiGeorge's syndrome, combined immunodeficiency disease (SCID), Chediak-Higashi cc syndrome, Cushing's disease, Addison's disease, autoimmune thyroiditis, crowe's disease, diabetes mellitus, Good pasture's syndrome, gout, cc syndrome, raral, bacterial, fungal, parasitic, protozoal, and helminthic cinfections and cell proliferative disorder such as arteriosclerosis, atherosclerosis, cirrhosis, hepatitis, psoriasis and cancer. PPIM cc polynucleotide sequences can be used in somatic or germline gene therapy can disorder such as arteriosclerosis, conditionation probes useful in mapping the naturally occurring genomic sequences and in molecular biology techniques.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
foetal abnormality; developmental abnormality; haematopoietic disorder; immune system disorder; ALDS; autoimmune disease; heumatoid arthritis; inflammation; allergy; neurological disorder; ALDAbeimer's disease; Parkinson's disease; cognitive disorder; schizophrenia; asthma; skin disorder; psoriasis; sepsis; diabetes; atherosclerosis; cardiovascular disorder; angiogenic disorder; kidney disorder; gastrointestinal disorder; pregnancy-related disorder; gene therapy; endocrine disorder; infection; wound healing; vulnerary;
                                                                                                                                                                                                                                                                                         1782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New protease (inhibitors) useful for diagnosis and autoimmune/inflammatory disorders such as acquired syndrome, Cushing's disease, Addison's disease and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-AUG-1999;
21-OCT-1999;
                                                                                                                                                                 Human gene 13 encoded secreted protein HDPNW93, SEQ ID NO:103.
                                                                                                                                                                                                     17-JUL-2001
                                                                                                                                                                                                                                     AAE01782;
                                                                                                                                                                                                                                                                    AAE01782 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   disorders such as cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yang
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                                                                                                                                                                                                                                                                                                                                                     726
                                                                                                                                                                                                                                                                                                                                                                                    1 CSVPLTSVC
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|csvpitdpc 734
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DB; AAF81739.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٠.
                                                                                                                                    secreted protein; proliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 114-115; 134pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   742
                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                   (first entry)
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99US-0160807.
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                                                                                                                                                                                                                                                                    Protein; 802
                                                                                                                                                                                                                                                                                                                                                                                                                                     76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bandman O,
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                English
                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                             DB 22,
2.2e+02;
2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 742;
                                                                                                                                    cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunodeficiency
cell proliferative
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786

1 CSVPLTSVC 9 csvpitdpc 794

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CC 28 genes, based on the tissues in which they are most highly expressed, CC and include developing products for the diagnosis or treatment of CC proliferative disorders, cancer, tumours, foetal and developmental CC abnormalities, haematopoietic disorders diseases of the immune system, CC AIDS, autoimmune diseases (e.g., rheumatoid arthritis), inflammation, CC allergies, neurological disorders (e.g., Alzheimer's disease, CC Parkinson's disease), cognitive disorders, schizophrenia, asthma, CC skin disorders (e.g., psoriasis), sepsis, diabetes, atherosclerosis, CC gastrointestinal disorders, angiogenic disorders, kidney disorders, CC gastrointestinal disorders, angiogenic disorders, kidney disorders, CC gastrointestinal disorders, aprograncy-related disorders, endocrine CC disorders, and infections. The proteins can also be used to aid wound CC sunburn, to maintain organs before transplantation, for supporting cell CC culture of primary tissues, to regenerate tissues, to identify their CC cognate ligands or binding partners, and in chemotaxis, and can be used as a food additive or preservative to modify storage properties.

CC antibodies specific for a protein of the invention can be used in diagnostic immunoassays e.g., radioimmunoassay or enzyme linked immunosorbent assay (ELISA). The present sequence represents a human communication contains of the invention.
                 Query Match
Best Local
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amount of the new protein in a sample or by determining the presence of mutations in the new genes. Specific uses are described for each of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell culture; chemotaxis; food additive; chromosome binding partner identification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treating or ameliorating medical conditions, e.g., by protein or therapy. Pathological conditions can be diagnosed by determining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The genes and their secreted proteins are useful for preventing, treating or ameliorating medical conditions, e.g., by protein or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein genes and AAE01850-AAE01860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Page 492-494; 567pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-NOV-1999; 99US-0164744.
30-JUN-2000; 2000US-0215140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                           Sequence
                                                                                                                                 immunosorbent assay (EL:
secreted protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAD05579-AAD05658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            preventing, treating or amelioral Parkinson's diseases and cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New nucleic acid molecules encoding human secreted proteins, used preventing, treating or ameliorating a disorder, e.g. Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAD05591.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200134627-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
Similarity 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Komatsoulis
Conservative
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20..802
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1..19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 represent human secreted protein fragments or variants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   represent cDNAs corresponding AAE01770-AAE01849 represent the
                 76.0%;
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                 Score
Pred.
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2.4e+02;
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                                   Length 802
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AAU58469
                                                                                                                                                                                                                                                                                                                                     Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic CC polypeptides. The proteins and their associated DNA sequences are used in CC the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, CC pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. CC P. acnes is also involved in infections of bone, joints and the central CC nervous system, however it is particularly involved in the inflammatory CC lesions associated with acne vulgaris. A method for detecting the Presence or absence of P. acnes in a patient comprises contacting a CC sample with a binding agent that binds to the proteins of the invention CC and determining the amount of bond protein in the sample. The CC polypeptides may be used as antigens in the production of antibodies CC specific for P. acnes proteins. These antibodies can be used to CC downregulate expression and activity of P. acnes polypeptides and CC diagnostic agents for determining P. acnes polypeptides and CC diagnostic agents for determining P. acnes protein in the protein of the protein of the printed CC specification, but was obtained in electronic forms to the printed CC specification, but was obtained in electronic format directly from WIPO CR at firm who introubled for tageneroes.
                                                                                          Query Match
Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                    at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-APR-2000; 2000US-199047P.
02-JUN-2000; 2000US-208841P.
07-JUL-2000; 2000US-216747P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 1; SEQ ID No 19664; 1069pp; English.
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AAS59591.
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                                                                                                                        Score 37; DB Pred. No. 39;
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Matches 5; Conser
                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The inventiuseful in developmental biology and in elucidating cell signalling a cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072).
                                                                                                                                         1327 csiplvelc 1335
                                                                                                                                                                                                                                                                                   The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                        03-SEP-2001
                                                  AAG74036;
                                                                            AAG74036 standard; Protein; 90 AA.
                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 30330; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genes from Drosophila interactions -
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11-JUL-2000; 2000US-0614150
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                                                                                                                                                                                           Score 37; DB 22;
Pred. No. 8.2e+02;
2; Mismatches 2;
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Human colon cancer antigen

protein

SEQ ID NO:4800

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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                   expression. For example, N and P may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps. by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AAB37789 represent sequences used in the exemplification of the
               Human; gene therapy; neural disorder; immune system disorder; muscular disorder; reproductive disorder; gastrointestinal disorder; pulmonary disorder; cardiovascular disorder; renal disorder;
                                                                                                                                                                                                                                                                                                                                                                        present invention.

N.B. Pages 666 to 682 and page 7053 of the missing at time of publication, meaning no SEQ ID NO:1027 to 1052, 7921 and 7922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic acting and can be used in gene therapy and vaccine production. N and P may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders
     proliferative disorder; inflammation.
                                                                       Human cDNA SEQ ID NO: 451.
                                                                                                  10-JAN-2002
                                                                                                                              ABB10143;
                                                                                                                                                       ABB10143 standard;
                                                                                                                                                                                                                                                                                                                                                Sequence
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03-NOV-1999;
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                                                                                                                                                                                                                                                                            Local Similarity
nes 6; Conserv
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ctfpllsvc
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                                                                                                                                                                                                                                                                              Conservative
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99US-0163280.
                                                                                                                                                     Protein; 133
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66.7%;
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and/or treating colorectal cancers -
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  14-AUG-2000

18-AUG-2000

22-AUG-2000

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22-AUG-2000

23-AUG-2000

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01-SEP-2000

01-SEP-2000
18-SEP-2000;
14-SEP-2000;
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21-SEP-2000;
21-SEP-2000;
25-SEP-2000;
25-SEP-2000;
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07-JUL-2000;
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11-JUL-2000;
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19-MAY-2000;
07-JUN-2000;
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04-FEB-2000;
24-FEB-2000;
02-MAR-2000;
16-MAR-2000;
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              2000US-233065P.
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Best Local S
Matches 6
04 - FEB - 2000;
24 - FEB - 2000;
02 - MAR - 2000;
16 - MAR - 2000;
17 - MAR - 2000;
18 - APR - 2000;
19 - MAY - 2000;
20 - JUN - 2000;
28 - JUN - 2000;
30 - JUN - 2000;
30 - JUN - 2000;
                                                                                                                                                                                                                                                                                             Endocrine protein; human; mouse; rabbit; goat; horse; food additive; cat; dog; chicken; sheep; immunosuppressive; antiarthritic; vasotropic; antirheumatic; antiproliferative; cytostatic; cardiant; neuroprotective; cerebroprotective; nootropic; antibacterial; virucide; fungicide; cancer; ophthalmological; vulnerary; gene therapy; autoimmune disease; neoplasm; hyperproliferative disorder; breast; liver; cardiovascular disorder; cerebrovascular disorder; nervous system disorder; bacterial infection; fungal infection; viral infection; ocular disorder; endocrine disorder; gastrointestinal disorder; renal disorder; respiratory disorder; wound healing; skin aging; organ transplantation; food preservative; tissue regeneration; anti-infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention provides human cDNAs, proteins and related genomic DNAs. These can be used in the treatment of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders and inflammation. The present sequence is a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 11; SEQ ID NO: 451; 859pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU18408 standard; Protein; 133 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polypeptide is used in preventing, treating or ameliorating a medical condition
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N-PSDB; ABA06365.
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                                                                                                                                                                                     17-JAN-2001;
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                                                                                                                                                                                                                                                                       Homo sapiens.
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les 6; Conser
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2000US-0180628
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66.7%;
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2000US-0216880. 2000US-0217487. 2000US-0217496. 2000US-0218290.

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2000US - 0225266
2000US - 0225267
2000US - 0225278
2000US - 02252447
2000US - 02257447
2000US - 0225758
         08-NOV-2000
17-NOV-2000
17-NOV
Sequences AAU18282-AAU18507 represent endocrine polypeptides of the invention. Endocrine polypeptides and their associated polynucleotides are useful in the diagnosis, treatment and prevention of various types disorders in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. A pathological condition can be determined by determining the presence or absence of a mutation in an endocrine polynucleotide. The treatable disorders include autoimmune diseases such as rheumatoid arthritis, hyperproliferative disorders such as neoplasms
                                                                                                                                                                                                                                                                       WPI; 200
N-PSDB;
                                                                                                                                                                                        Isolated polypeptide for treating, preventing and/ or prognosing disorders of the endocrine system such as reproductive disorders, endocrine cancers and also for testing and detection e.g. diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-OCT-2000;
20-OCT-2000;
01-NOV-2000;
                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                              (HUMA-) HUMAN
                                                                                                                                                                                                                                                                       2001-451936/48.
DB; AAS29637.
                                                                                                                                                                11;
                                                                                                                                                                                                                                                                                                                           CA,
                                                                                                                                                              SEQ ID No
                                                                                                                                                                                                                                                                                                                         Barash SC,
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2000US-0246611
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2000US-0241826.
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2000US-0246475.
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S-0246523.
S-0246524.
S-0246525.
S-0246525.
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such

of.

11-JUL-2000 11-JUL-2000 11-JUL-2000 14-JUL-2000 14-AUG-2000 16-SEP-2000 17-SEP-2000 18-SEP-2000 18-SEP-2000 18-SEP-2000 18-SEP-2000 18-SEP-2000 18-SEP-2000 18-SEP-2000 19-SEP-2000 19-SEP-2000 11-SEP-2000 11-SEP-2000 11-SEP-2000 11-SEP-2000 11-SEP-2000 11-SEP-2000 11-SEP-2000 11-SEP-2000 11-SEP-2000 12-SEP-2000 11-SEP-2000 11-CCT-2000 12-CCT-2000 13-CCT-2000 20-CCT-2000 20-CCT-2000 20-CCT-2000 20-CCT-2000 20-CCT-2000 20-CCT-2000 20-CCT-2000 20-CCT-2000 20-CCT-2000

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RESULT 14
AAM43498
ID AAM434
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AC AAM434
XX
AC AAM434
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DT 22-OC?
XX
DT 22-OC?
XX
Human
XX

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Best Local :
18-APR-2000
19-MAY-2000
07-JUN-2000
28-JUN-2000
07-JUL-2000
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11-JUL-2000
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26-JUL-2000
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24-FEB-2000;
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16-MAR-2000;
17-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; antiarthritic; antirheumatic; antiproliferative; vasotropic; cerebroprotective; nootropic; neuroprotective; antibacterial; virucide; fungicide; ophthalmological; cytostatic; immunosuppressive; nootropic; neuroprotective; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiuleer; vulnerary; anticonvulsant; antibacterial; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAM43498 standard; Protein; 133 AA.
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2000US-0214886.
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nnn0US-0215135.
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66.7%;
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The invention relates to human polynucleotides (AAI63803-AAI64012) and CC the encoded proteins (AAM434497-AAM460) useful for preventing treating CC or ameliorating medical conditions e.g. by protein or gene therapy. The CC genes were isolated from a range of human tissues disclosed in the CC specification. The nucleic acids, proteins, antibodies and (ant)agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, CC e.g. breast and ovarian cancer and other cancers of the adrenal gland, by the continuous based on the concers, and composition of the adrenal gland, CC urogenital; (b) immune disorders e.g. Addison's disease, allergies, CC crohn's disease, multiple sclerosis, rheumatoid arthritis and ulcerative CC colitis; (c) cardiovascular disorders such as myocardial ischaemias; CC (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and CC epilepsy; and (f) infectious diseases such as viral, bacterial, fungal CC Note: The sequence data for this patent did not form part of the CC printed specification, but was obtained in electronic format directly crom wipo at ftp.wipo.int/pub/published_pct_sequences.
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17-MAR-2000;
18-APR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; secreted extracellular matrix protein; immunomodulatory; anti-fly; antianemic; antisclerotic; cardiant; vascular; cerebroprotective; thrombolytic; antimicrobial; ophthalmic; cytostatic; antialzheimers; immune/autoimmune disease; HIV infection; anaemia;
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wound healing; immunogen; gene therapy; antisense; food additive.
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04-FEB-2000;
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CC polynucleotides and proteins are used to prevent treat a medical CC condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, CC chickens or sheep. For example, disorders associated with decreased CC expression of SPs. The SP polynucleotide or a vector expressing them may CC be administered to treat diseases by gene therapy. Antisense molecules may be administered to down regulate expression of SPs by binding with CC the cells own genes and preventing their expression. The polynucleotides CC may be administered to down regulate expression. The SPs may also be used as Antigens to produce antibodies and to identify modulators (agonists and antagonists) of the SPs. The anti-(SP) antibodies and CC (agonists may also be used to down regulate expression and activity of SP and as diagnostic agents for detecting the presence of SPs in samples. The disorders include for example: immune/autoimmune diseases (e.g. HIV (human immunodeficiency virus) infections, anaemia, rheumatoid arthritis and multiple sclerosis), cancers and hyperproliferative disorders (e.g. Carkinson's disease), neurological diseases (e.g. Alzheimer's disease, CC ariest, tachycardia and angina), infections caused by bacteria, viruses conclude wound healing maintenance of corneal infections). Other uses
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17-NOV-2000;
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include wound healing, maintenance of organs before transplantation,
                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acid molecules encoding human secreted extracellular matrix proteins, used in preventing, treating or ameliorating a disorder, e.g. Alzheimer's and Parkinson's diseases and cancers -
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N-PSDB; AAS31245.
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Search completed: June 17, 2002, 16:02:14 Job time: 423 sec

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TELEX: 910/371-7168
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CLASSIFICATION: 435
ATTOREY/AGENT INFORMATION:
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REGISTRATION NUMBER: 33,05
REFERENCE/DOCKET NUMBER: P
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ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno
CITY: South San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
COCTUBABE: Windatin (Genentech)
                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: TYPE C LECTINS NUMBER OF SEQUENCES: 15
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: LASKY, I APPLICANT: WU, KAI
                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 1487 amino acids
                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-3216
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                    SOFTWARE: WinPatin (Ge CURRENT APPLICATION DATA:
929 CSVPLPSIC
                                      Local Similarity
nes 7; Conser
                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/840,062
                 1 CSVPLTSVC
                                                                                                                                                                                                                                                                                                                                  94080
                                                                                                           Amino Acid
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                                                                                                  Linear
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77.8%;
                                                                                                                                                                                                                                                                              (Genentech)
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US-08-659-235C-7
US-08-485-721-1
US-08-392-935-11
US-08-397-825-7
US-08-11-939-26
US-08-11-939-26
US-08-162-402B-27
US-08-18-727-9
US-08-897-236-9
US-08-897-236-2
US-08-897-236-1
US-08-897-236-1
US-08-897-236-1
US-08-897-236-1
US-08-897-236-1
US-08-897-236-1
US-09-167-874-1
US-09-167-874-1
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                                                 Score 43; DB Pred. No. 18;
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                                       Mismatches
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US-08-688-342-1

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                                                                                                                                                                                                                                  Sequence 1, Application US/09113788 Patent No. 5969104
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Patent No. 5871964
                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 415-845-4166 INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: peptide IMMEDIATE SOURCE: LIBRARY: MMLRIDT01 CLONE: 515847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL
                                                                                                            APPLICANT: Au-Young, Janice
APPLICANT: Cocks, Benjamin G.
APPLICANT: Goli, Surya K.
APPLICANT: Hilman, Jennifer L.
TITLE OF INVENTION: NOVEL HUMAN C-TYPE LECTIN
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Billings, Lucy J.

REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0095-1 CIP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/6 FILING DATE: Filed Herewith ATTORNEY/AGENT INFORMATION:
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: GO11, Surya K.
APPLICANT: Hillman, Jennifer L.
TITLE OF INVENTION: NOVEL HUMAN C-TYPE LECTIN
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                    187 CSVPSYSIC 195
                                          STREET: 3174 FOR CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 201 amino
TYPE: amino acid
STRANDEDNESS: Sir
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OPERATING SYSTEM:
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CITY: Palo Alto
STATE: CA
                  COUNTRY: US
                                    STATE:
                                                                                    ADDRESSEE:
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94304
                                  CA
                                                                 3: Incyte Pharmaceuticals, Inc
3174 Porter Drive
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3174 Porter Drive
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Goli, Surya K.
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66.7%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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APPLICATION NUMBER: US/08/586,165
FILING DATE: 16-JAN-1996
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricla
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: HU95-05
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
TELEPAX: (617) 861-9540
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                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Laufer, Edward M.
APPLICANT: Orozco, Ollvia E.
APPLICANT: Tabin, Clifford J.
TITLE OF INVENTION: Fringe Proteins and Pattern Formation
NUMBER OF SEQUENCES: 9
                                                                                                                                                                           CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMMEDIATE SOURCE:
LIBRARY: MMLR1
CLONE: 515847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ Version 1.5 CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
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                                                                                                                                                                                                                                                                                                                                     CITY: Lexington
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16-JAN-1996
N: P^^
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66.7%;
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    Mismatches

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Pred. No.
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36;
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251 CSLPLTIRC 259

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TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-134-012-3
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SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Metters, Kathleen
APPLICANT: Rushmore, Thomas H.
APPLICANT: Slipetz, Deborah M.
TITLE OF INVENTION: DNA ENCODING PROSTAGLANDIN RECEPTOR IP
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 35,403
REFERENCE/DOCKET NUMBER: 19
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
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                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 386 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Wallen, John W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  293 CSIPIWKIC 301
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Local Similarity 44.4%;
hes 4; Conservative
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                                    Local Similarity 66.7%; les 6; Conservative
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FILING DATE: 06-OCT-1993
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Rahway
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1 CSVPLTSVC 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Grygorczyk, Richard
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Pred. No. 96;
                                            Score 34; DB 1;
Pred. No. 1.5e+02;
1; Mismatches 2
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••
                                                                       Length 386;
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; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-520-519-3
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US-08-816-693A-51
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                                                                                                                                                                             Sequence 51, Application US/08816693A Patent No. 5874241 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                               Matches
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (908) 594-5321 INFORMATION FOR SEQ ID NO: 3:
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APPLICANT:
APPLICANT:
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MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/520,519
FILING DATE: 29-AUG-1995
CLASSIFICATION: 530
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: Tribble, Jack L.
REGISTRATION NUMBER: 32,633
REFERENCE/DOCKET NUMBER: 191
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Rushmore, Thomas H.
APPLICANT: Slipetz, Deborah M.
TITLE OF INVENTION: DNA ENCODING PROSTAGLANDIN RECEPTOR IP
NUMBER OF SEQUENCES: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                  ADDRESSEE: Dressler, Rockey, Milnamow & Katz
                                                                                      APPLICANT: Takahashi, Joseph S
APPLICANT: Turek, Fred W
APPLICANT: Pinto, Lawrence H
TITLE OF INVENTION: Clock Gene and Gene Product
NUMBER OF SEQUENCES: 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                           251 CSLPLTIRC 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: sin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 07065-0907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Rahway
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CITY: Chicago
STATE: Illinois
                                     STREET:
                                                                                                                                                                                                                                                                                                                                             1 CSVPLTSVC 9
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                                                                                                                                                                                                                                                                                                                                                                           6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            386 amino acids
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                                 Two Prudential Plaza, Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grygorczyk, Richard
Metters, Kathleen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
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66.7%;
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Pred. No. 1.5e+02;
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COMPUTER READABLE FORM: MEDIUM TYPE: Floppy

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

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US-09-496-672-51
; Sequence 51, Applica;
; Patent No. 6291429
; GENERAL INFORMATION:
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                                                                                                                                                                                       Query Match
Best Local Similarity
6; Conserva
                                                                                       RESULT
                                                                                                                                                                                                                                                                                               ; ORGANISM: Mus musculus US-08-885-291-51
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                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 51
LENGTH: 747
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 51, Application US/08885291A Patent No. 6057125
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                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: CLOCK GENE AND GENE PRODUCT FILE REFERENCE: 0290-5
CURRENT APPLICATION NUMBER: US/08/885,291A
CURRENT FILING DATE: 1997-06-30
CARLIER APPLICATION NUMBER: 08/816,693
EARLIER FILING DATE: 1997-03-13
EARLIER FILING DATE: 1997-03-13
UNMBER OF SEQ ID NOS: 55
 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Takahashi, Joseph S. APPLICANT: Turek, Fred W. APPLICANT: Pinto, Lawrence H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 312-616-5460 INFORMATION FOR SEQ ID NO: 51:
                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
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NAME: NO. 5874241thrup, Thomas E
REGISTRATION NUMBER: 33,268
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-616-5400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                        215 CRVPLGKVC 223
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CLASSIFICATION: 435
                                                                                                                                                                        1 CSVPLTSVC 9
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Takahashi, Joseph S
                                                  Application US/09496672
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66.7%;
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Pred. No. 2.9e+02;
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Pred. No. 2.9e+02;
0; Mismatches 3;
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                                                                                                                                                                                                                                       Length 747;
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; ORGANISM: Mus musculus
US-09-496-672-51
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SEQ ID NO 51
LENGTH: 747
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                                        INFORMATION FOR SEQ ID NO:
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CURRENT FILING DATE: 2000-02-03
PRIOR APPLICATION NUMBER: 08/885,291
PRIOR FILING DATE: 1997-06-30
PRIOR FILING DATE: 1997-03-13
PRIOR FILING DATE: 1997-03-13
PRIOR FILING DATE: 1997-03-13
NUMBER OF SEQ ID NOS: 55
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APPLICANT: Pinto, Lawrence H.
TITLE OF INVENTION: CLOCK GENE AND GENE PRODUCT
FILE REFERENCE: 0290-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                         REGISTRATION NUMBER: 26,389
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: 908-522-6927
                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Kassenoff, Melvyn
                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/543,246B
                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US92/02469
FILING DATE: 27-MAR-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                             FILING DATE: 28-MAR-PRIOR APPLICATION DATA:
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                                    TELEPHONE: 908-522-6955
                                                                                                                                                                                             APPLICATION NUMBER: US 08/122,514 FILING DATE: 24-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: US
ZIP: 07901-1027
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nes 6; Conserv
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ADDRESSEE: No. 6262244artis Corporation
LENGTH:
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66.7%;
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                                                                                                            26,389
ER: 118-7704/PCT/CONT
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Pred. No. 2.9e+02;
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                             Query Match
Best Local Similarity
Matches 5; Conserv
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INFORMATION FOR SEQ ID NO: 9:
                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 26,389
REFERENCE/DOCKET NUMBER: 118-7704/PCT/CONT
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: C-terminal
                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 216 amino acid
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 0: FILING DATE: 24-SEP-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/I
FILING DATE: 27-MAR-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
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                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
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nes 5; Conserv
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CITY: Summit,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                               NAME: Kassenoff, Melvyn M
REGISTRATION NUMBER: 26,38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/543, 246B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                TOPOLOGY: linear
                                                                                                                                                                                                                                               TELEPHONE:
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55.6%;
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                                                64.0%;
55.6%;
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                             Score 32; DB 4; Le
Pred. No. 1.8e+02;
1; Mismatches 3;
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Pred. No. 1.1e+02;
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                                                              Length 216;
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                                Indels
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RESULT 13
US-08-915-795-9
; Sequence 9, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
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US-08-543-246B-24
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                                                                                                                                                                                             Query Match
Best Local Similarity
Thehes 5; Conserv
                                                                                                                                                                                                                                                                                                         US-08-543-246B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 24, Application US/08543246B Patent No. 6262244
GENERAL INFORMATION:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTAL.
ZIP: 07901-102,
ZIP: 07901-102,
COMPUTER READABLE FORM:
COMPUTER: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
COMPUTER: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 908-522-6955
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: I
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/02469
FILING DATE: 27-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/122,514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 28-MAR-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 24-SEP-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 203 CSTPNTYIC 211
                                                                                                                                           203 CSTPNTYIC 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/543,246B FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Kassenoff, Melvyn M. REGISTRATION NUMBER: 26,38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Michael W. Glynn ADDRESSEE: No. 6262244artis Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Summit,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                              1 CSVPLTSVC 9
                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 216 amino acids
Marc G. ACHEN
                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        908-522-6927
                                                                                                                                                                                                                                                                                                                                                          : protein
NO
                                                                                                                                                                                                                                                                                                                        C-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA and amino acid sequence specific for natural killer cells
                                                                                                                                                                                                                                  64.0%;
55.6%;
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                                                                                                                                                                                                                                 Score 32; DB 4;
Pred. No. 1.8e+02;
                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                 Length 216;
                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                Gaps
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GENERAL INFORMATION:
APPLICANT: MATC G. ACHEN
APPLICANT: ANDTHE WILKS
APPLICANT: Steven A. STACKER
APPLICANT: KATI ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
                                                                                                                                                                                                                                                                                                                                                             US-08-915-795-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: ; ORIGINAL SOURCE: ; TISSUE TYPE: 1 US-08-915-795-9
                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/08915795
Patent No. 6235713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                   COMPUTER READABLE FORM:
                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 10:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: EVANS, JOSEPH D.
REGISTRATION NUMBER: 26,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                  169 SVPLTSV 175
                                                                                                                      CITY: Washington STATE: DC
MEDIUM TYPE: Floppy disk
CÓMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                     COUNTRY:
                                                                                                                                                      STREET:
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nes 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: sin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/915,795 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 321 amino acids
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                                                                                                   United States of America
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Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; L
. 2.7e+02;
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US-08-915-795-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Marc G
APPLICANT: Andrew
                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (202) 628-884
TELEX: N/A
INFORMATION FOR SEQ ID NO:
                                                                                                      REFERENCE/DOCKET NUMBER: 10
REFERENCE/TOOKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/915,795
                SEQUENCE CHARACTERISTICS:
LENGTH: 354 amino acid
                                                                                                                                                        FILING DATE:
CLASSIFICATION: 536
ATTORNEY_AGENT INFORMATION:
NAME: EVANS, JOSeph D.
REGISTRATION NUMBER: 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: KAR1 ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: EVANNS, JOSEPH D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 100
                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGINAL SOURCE:
TISSUE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: PORTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (202) 628-8800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              140 SVPLTSV 146
                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 1200 G CITY: Washington
                                                                                        TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                             STATE:
                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: U
ZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C. STREET: 1200 G Street, NW, Suite 700
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: 354 amino acids amino acid
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                                                                                        (202) 628-8844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Marc G. ACHEN
Andrew F. WILKS
Steven A. STACKER
                                                                                                                                                                                                                                                                                                                                                                                           United States of America
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GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
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OM protein protein search, using sw model

Run on: June 17, 2002, 15:58:24; Search time 95.43 Seconds (without alignments) 7.048 Million cell upda

cell updates/sec

Title: Perfect score: US-09-761-636A-11 42

Sequence:

Scoring table: Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters:

283138 seqs, 96089334 residues

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 10 Listing first 45 summaries 100%

Database PIR\_71:\* pir3:\*
pir4:\* pir1:\* pir2:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	6	G	4	w	ນ	_	Result No.
32	32	32	32	32	32	<b>33</b> .	33	33	. 33	33	33	33	33	33	33	ω S	33	33	33	ω ω	34	34	34	36	36	36	38	39	Score
76.2	76.2	76.2	76.2	76.2	76.2	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	81.0	81.0	81.0	85.7		85.7	90.5	•	Query Match
491	452	305	303	270	77	3133	3020	1227	891	670	647	515	303	303	230	223	207	207	191	55	2476	1513	1506	2533	2533	980	380	2543	Length
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A49179	F84712	B53782	T42933	T47421	JC4790	S52093	A43932	T49963	н86306	F88297	T23814	T23089	C33374	WZBEM6	A38346	B38346	B71943	A64655	I46412	S66336	T34022	A54895	T30886	T28674	T28675	T00045	D44490	T31687	ID
	hypothetical prote	S		hypothetical prote	proteinase inhibit	hemocytin - silkwo		hypothetical prote	F20D23.20 protein	$\mathbf{L}$	hypothetical prote		hypothetical prote	gene 20 protein -	ultra-high-sulfur	C.		hypothetical prote	keratin KAP5.4 - s	protein kinase AK2		mucin 2, intestina	integumentary muci	alpha-51D-immobili	alpha-51D immobili	cellodextrin phosp	ate	suface antigen - P	Description

vascular endothel	S52130	Ν.	190	73.8	3 <u>1</u>	51 4
ultra high-sulfur	S18946	- ر	169	73.8	3 32	3
hypothetical prote	T27849	N	161	73.8	31	42
ovine vascular en	S57956	N	146	73.8	31	41
vascular endothel	151295	N	128	73.8	31	40
vascular endothel	A33787	N	120	73.8	31	39
hypothetical prote	S16496	Ŋ	110	73.8	31	38
chymotrypsin/elas	S08572	Ŋ	63	73.8	31	37
zonadhesin - mouse	T42215	N	5376	76.2	32	36
surface protein ty	S50820		2395	76.2	32	35
hypothetical prote	T29764	N	2180	76.2	32	34
still life protein	T13704	Ν	2044	76.2	32	3
tegument protein (	S55598	N	1319	76.2	32	32
melanocyte-specifi	A41234	ผ	668	76.2	32	31
melanoma-associat	138400	N	662	76.2	32	30

# ALIGNMENTS

R;Bourgain-Guglielmetti, F.; Caron, F.
Journal of Eukaryot. Microbiol. 43, 303-314, 1996
A;Title: Molecular characterization of the D surface
A;Reference number: Z21061; MUID:96313351
A;Accession: T31687 suface antigen - Paramecium primaurelia
C;Species: Paramecium primaurelia
C;Date: 19-May-2000 #sequence\_revision 19-May-2000 #text\_change 23-Mar-2001
C;Accession: T31687 Вb A;Genetic code: SGC5 C;Superfamily: G surface protein A;Cross-references: EMBL:X96616; NID:g1235576; PIDN:CAA65436.1 C;Genetics: QΥ A; Molecule type: DNA A; Residues: 1-2543 <BOU> A; Status: preliminary Query Match Best Local S Matches 5 2158 CIPITSC 2164 Local Similarity nes 5; Conserv 1 CVPLTSC 7 Conservative 92.9%; 2; Score 39; DB Pred. No. 26; Mismatches 2 0; Length 2543; protein gene subfamily in Par 0 Gaps 0

RESULT

retrovirus-related reverse transcriptase homolog (clone NvC) - pteromalid wasp (Na C;Species: Nasonia vitripennis C;Date: 22-Sep-1993 #sequence\_revision 18-Nov-1994 #text\_change 01-Dec-2000 C;Accession: D44490; F40442

R;Burke, W.D.; Eickbush, D.G.; Xiong, Y.; Jakubczak, J.; Eickbush, T.H. Mol. Biol. Evol. 10, 163-185, 1993
A;Title: Sequence relationship of retrotransposable elements R1 and R2 within and A;Reference number: A44490; MUID:93196484
A;Contents: retrotransposable element R1

A; Accession: D44490

A; Molecule type: nucleic acid A; Residues: 1-380 <BUR> A; Status: preliminary; not compared with conceptual translation

A;Note: sequence extracted from NCBI backbone (NCBIP:127237)
R;Jakubczak, J.L.; Burke, W.D.; Eickbush, T.H.
Proc. Natl. Acad. Sci. U.S.A. 88, 3295-3299, 1991
A;Title: Retrotransposable elements R1 and R2 interrupt the rRNA genes of most ins A;Reference number: A40442; MUID:91195337
A;Accession: F40442
A;Status: preliminary; nucleic acid sequence not shown; not compared with conceptual contents of the sequence o A;Molecule preliminary; nucleic acid sequence not shown; not compared with conceptue type: DNA

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A:Cross-references: EMBL:X96400;
C;Genettcs:
A:Gene: alpha-51D
A:Genettc code: SGC5
A:Introns: 280/3; 538/2; 1248/2
C;Superfamily: G surface protein
                                                                                                                                                                                                                                                                                                                                 R:Schwegmann, K.J.
submitted to the EMBL Data Library, March
A:Reference number: 220506
A:Accession: T28675
                                                                                                                                                                                                                                                                                                                                                                                              alpha-51D immobilization antigen - Paramecium tetraurelia C;Species: Paramecium tetraurelia C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change C;Accession: T28675
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A; Gene:
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R;Kawaguchi, T.; Ikeuchi, Y.; Tsutsumi, N.; Kan, A.; Sumitani, J.; Arai, M.
J. Ferment. Bioeng. 85, 144-149, 1998

A;Title: Cloning, nucleotide sequence, and expression of the Clostridium th A;Reference number: Z14077

A;Recession: T00045

A;Status: preliminary; translated from GB/EMBL/DDBJ
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A; Residues: 1-2533 <SCH>
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RESULT
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A; Residues: 1-980 <KAW>
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;Experimental source: ATCC 27405
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57.1%;
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Pred. No.
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Pred. No. 44;
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Pred. No. 8.
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A; Molecule type: mRNA A; Residues: 1-1513 <OHM> A; Cross-references: GB:U

C; Superfamily:

von Willebrand

factor; von

Willebrand

factor type A repeat

homology;

amino-terminal

region

of a

rat MUC

gene

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integumentary mucin B.1 - African clawed frog (fragment)
C;Species: Xenopus laevis (African clawed frog)
C;Date: 22-Oct-1999 #sequence_revision 22-Oct-1999 #text_chang
C;Accession: T30886
R;Joba, W.; Hoffmann, W.
J. Biol. Chem. 272, 1805-1810, 1997
A;Title: Similarities of integumentary mucin B.1 (FIM-B.1) fro
A;Reference number: Z20920; MUID:97153143
A;Accession: T30886
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-1506 <JOB>
R;Ohmori, H.; Dohrman, A.F.; Gallup, M.; 7
J. Biol. Chem. 269, 17833-17840, 1994
A;Title: Molecular cloning of the amino-te
A;Reference number: A54895; MUID:94299489
A;Accession: A54895
                                                                                                                        mucin 2, intestinal/tracheal - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 23-Mar-1995 #sequence_revision 23-Mar-1995 #text_change 11-Jan-2000
C;Accession: A54895
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Best Local Similarity
"-+~hes 5; Conserv
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A;Note: FIM-B.1
C;Superfamily: pig submaxillary mucin
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C;Superfamily: G surface
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A; Residues: 1-2533 <
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Pred. No. 1.5e+02;
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                                                                                                       Gum Jr., J.R.; Kim,
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C; Keywords: intestine

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protein kinase AK23 (EC 2.7.1.-) - Arabidopsis thaliana (fragment) C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 19-Mar-1997 #sequence_revision 25-Apr-1997 #text_change 24 C;Accession: S66336; S58262 R;Thuemmler, F; Kirchner, M.; Teuber, R.; Dittrich, P. Plant Mol. Biol. 29, 551-565, 1995 A;Title: Differential accumulation of the transcripts of 22 novel A;Reference number: S66314; MUID:96123233 A;Accession: S66336
                                                                                                                                                C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; C;Keywords: ATP; phosphotransferase; protein kinase F;1-55/Domain: protein kinase homology (fragment) <KIN>
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A; Description: may
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A;Residues: 1-2476 <HAR>
A;Cross-references: EMBL:U40024; NID:g1066465; PID:g1066466; PIDN:AAC48486.1
A;Experimental source: strain Meishan; testis
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J. Biol. Chem. 270, 26025-26028, 1995
A;Title: A sperm membrane protein that binds in a A;Reference number: Z21464; MUID:96064658
A;Accession: T34022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Sus scrofa domestica (domestic pig)
C;Date: 02-Sep-2000 #sequence_revision 02-Sep-2000 #text_change 02-Sep-2000
C;Accession: T34022
                                                                                                                                                                                                        A;Gene: AK23
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A; Residues: 1-55 <THU>
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CVPLTS 32
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71.4%;
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Pred. No. 2.3e+02;
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A;Title: Genomic sequence comparison of two unrelated isolates of the human gastric A;Reference number: A71800; MUID:99120557
A;Accession: B71943
A;Status: preliminary
A;Molecule type: DNA
                                                                                                               hypothetical protein jhp0344 - Helicobacter pylori (strain J99)
c; Species: Helicobacter pylori
A; Variety: strain J99
c; Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 08-Oct-1999
c; Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 08-Oct-1999
c; Accession: B71943
R; Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.;
I ves, C.; Gibson, R.; Merberg, D.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; V
Nature 397, 176-180, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C:Accession: A64655
R:Tomb, J.F.; White, O.; Kerlavage, A.R.; Clayton, R.A.; Sutton, G.G.; Fleischmann, Peterson, S.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; Mcson, J.D.; Kelley, J.M.; Cotton, M.D.; Weidman, J.M.; Fujii, C.; Bowman, C.; Watthk Nature 388, 539-547, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R; Jenkins, B.J.; Powell, B.C.
J. Invest. Dermatol. 103, 310-317, 1994
A; Title: Differential expression of genes
A; Reference number: 146412; MUID:94358466
A; Accession: 146412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA A;Residues: 1-207 <TOM>
A;Cross-references: GB:AE000615; GB:AE000511; NID:g2314230; PIDN:AAD08133.1; PID:g2
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A;Accession: A64655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein HP1081 - Helicobacter pylori (strain 26695)
C;Species: Helicobacter pylori
C;Date: 09-Aug-1997 #sequence_revision 09-Aug-1997 #text_change 08-Oct-1999
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A; Residues: 1-191 <JEN>
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ultra-high-sulfur keratin 2 - mouse
C:Species: Mus musculus (house mouse)
C:Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 24-Sep-1999
C:Accession: A38660; B38346
R;Wood, L.; Mills, M.; Hatzenbuhler, N.; Vogeli, G.
J. Biol. Chem. 266, 4024, 1991
A;Title: Serine-rich ultra high sulfur protein gene expression in murine hair and skin da;Reference number: A38660; MUID:91154184
A;Reference number: A38660; MUID:91154184
A;Residues: 1-223 <WO2>
A;Residues: 1-223 <WO2>
A;Cross-references: GB:M37560; NID:g200963; PIDN:AAA40107.1; PID:g200964
A;Note: this is a correction
R;Wood, L.; Mills, M.; Hatzenbuhler, N.; Vogeli, G.
J. Biol. Chem. 265, 21375-21380, 1990
A;Title: Serine-rich ultra high sulfur protein gene expression in murine hair and skin da;Reference number: A38346; MUID:91065960
A;Accession: B38346; MUID:91065960
                                                                                                                                                                                   ultra-high-sulfur keratin 1 - mouse C; Species: Mus musculus (house mouse) C; Date: 28-Jun-1991 #sequence_revision 28-Jun-1991 #text_change 24-Sep-1999 C; Accession: A38346 R; Wood, L.; Mills, M.; Hatzenbuhler, N.; Vogeli, G. J. Biol. Chem. 265, 21375-21380, 1990 A; Title: Serine-rich ultra high sulfur protein gene expression in murine hai A; Reference number: A38346; MUID:91065960 A; Accession: A38346 AUID:91065960 A; Status: preliminary
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A;Cross-references: GB:AE001470; GB:AE001439; NID:g4154869; PIDN:AAD05923.1; PID:g415487
A;Experimental source: strain J99
C;Genetics:
A;Gene: jhp0344
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A;Residues: 1-230 <WOO>
A;Cross-references: GB:M37759; NID:g200961; PIDN:AAA40106.1; PID:g200962
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A; Residues: 1-21, 'GGCGSGCGGCGSNCGGCGSSCCKPVCC', 22-40, 'GSS', 44-45, 'G', 47-48, 'S', 50, 'GSS'
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Job time:
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A,Description: Primary structure of the herpesvirus saimiri genome.
A,Reference number: A36806
A,Accession: B36808
A,Accession: B36808
A,Molecule type: DNA
A;Residues: 1-303 <ALB>
A;Cross-references: GB:X64346; NID:g60320; PIDN:CAA45644.1; PID:g60342
A;Cross-references: GB:X64346; NID:g60320; PIDN:CAA45644.1; PID:g60342
A;Choolecule type: DNA
A;Residues: 1-303 <ALB>
A;Cross-references: GB:X64346; NID:g60320; PIDN:CAA45644.1; PID:g60342
A;Cross-references: GB:X64346; NID:g60320; PIDN:CAA45644.1; PID:g6
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C;Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 16-Jul-1999
C;Accession: B36808
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Best Local Similarity
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C;Superfamily: varicella-zoster virus gene 35 protein
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C;Species: saimiriine herpesvirus 1
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85.7%;
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Pred. No.
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OM protein - protein search, using sw model
June 17, 2002, 16:24:29; Search time 44.84 Seconds (without alignments) 6.045 Million cell updates/sec
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Title:
Perfect score:
Sequence: US-09-761-636A-11 42 1 CVPLTSC 7

Run on:

Scoring table:

Searched:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 105224

105224 seqs, 38719550 residues

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt\_40:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

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RESULT 2
PKP1\_BOVIN

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359 CVPLSSC 365

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_	013717 schizosacch	-	-	•	-	•	•		_	_	P27512 mus musculu

# ALIGNMENTS

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1 CVPLTSC 7	Query Match 90.5%; Score 38; DB 1; Length 383; Best Local Similarity 85.7%; Pred. No. 2.1; Matches 6; Conservative 1; Mismatches 0; Indels 0; Gaps 0;	DOMAIN <1 228 REVERSE TRANSCRIPTASE.  DOMAIN 229 383 NUCLEIC ACID-BINDING ENDONUCLEASE.  SEQUENCE 383 AA; 43411 MW; DE296B380925251B CRC64;	InterPro; IPR000477; RVTse. Pfam; PF00078; rvt; 1. Transferase; RNA-directed DNA polymerase; Transposable element; Hydrolase; Notlease; Endonuclease.		agreement (See )@isb-sib.ch).	the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial	SWISS-PROT entry is copyright. It is produced through a co	+ {DNA}(N). + {DNA}(N).	Detween divergent insect species."; Biol. Evol. 10:163-185(1993).	Burke W.D., Eickbush D.G., Xiong Y., Jakubczak J.L., Eickbush T.H.; "Sequence relationship of retrotransposable elements R1 and R2 within	L] SEQUENCE FROM N.A. MEDITURE-03196A8A. DirbMod=8383703.	NCBI_TaxID=7425;	Hymenoptera; Apo	Ludonuctedse] (riagment). Nasonia vitripennis (Parasitic wasp). Eukarvota: Metazoa: Arthropoda: Tracheata: Hexapoda: Insecta:	Retrovirus related POL polyprotein from type I retrotransposable element R1 [Contains: Reverse transcriptase (EC 2.7.7.49);	01-JUN-1994 (Rel. 29, Created) 01-JUN-1994 (Rel. 29, Last sequence update) 16-CCT-2011 (Rel. 40, Last appotation update)	RESULT 1 PO13_NASVI STANDARD; PRT; 383 AA. AC 003271;

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RESULT ZAN_PIG ZAN_PIG ZAN Q2E DT 01-DT 01-DT 01-DE ZOO GN ZAN Sus
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Best Local S
Matches 6
                                             Q28983;
Q1-NOV-1997
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    Zowadhesin
ZAN.
Sus scrofa
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01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                   REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Cell type-specific desmosomal plaque proteins of the family: plakophilin I (band 6 protein).";
Differentiation 58:113-131(1944)
-1- FUNCTION: SEEMS TO PLAY A ROLE IN JUNCTIONAL PLAQU
                                                                                                                                                                                                                                                                                                                                                        REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                               Repeat
REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Ch
Mammalia; Eutheria; Ce
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PKP1_BOVIN
Q28161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00514; Armadillo_seg;
SMART; SM00185; ARM; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -I- SIMILARITY: BELONGS TO THE BETA-CATENIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Heid H.W., Schmidt A., Zimbel
Winter-Simanowski S., Stumpp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE-95196971; PubMed-7890138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bos taurus
                                                                                                                                                                                                                                                                                                              SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cell adhesion;
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les 6; Conserv
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   scrofa (Pig)
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SUBCELLULAR LOCATION: Nuclear and
                                                                                                                                                                                CVPPTSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS50176; ARM_REPEAT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR000225;
                                 precursor
                                           7 (Rel. 35, Create
7 (Rel. 35, Last s
2 (Rel. 41, Last s
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278
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(Rel. 41, Last sequence update)
(Rel. 41, Last annotation update)
                                                                                                                                                                                                                                       Conservative
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                                                                                                      STANDARD;
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317
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Cetartiodactyla; Ruminantia; Pecora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Armadillo.
hillo_seg; 5.
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85.7%;
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Stumpp S., Keith
                                                                                                                                                                                                                                                                                                              M.
                                                annotation
                                                            sequence update)
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ARM 2.
ARM 3.
ARM 4.
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ARM 7.
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ARM 7.
ARM 8.
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Pred. No.
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n M., Figge
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    SMART; SM00181; EGF; 1
SMART; SM00137; MAM; 1
SMART; SM00214; VWC; 2
SMART; SM00216; VWD; 4
 TRANSMEM
DOMAIN
DOMAIN
DOMAIN
                                                                                       Signal;
Repeat.
SIGNAL
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Pfam;
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InterPro;
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InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <del>-</del>
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute. Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1658-1667; 1777-1795 AND 1914-
STRAIN-MEISHAN; TISSUE-Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A., AND SEQUENCE OF 823-830; 859-872; 883-890; 920-925; 960-967; 1235-1244; 1349-1354; 1518-1532; 1624-1656; 168-1667; 1777-1795 AND 1914-1921.
                                                            DOMAIN
                                                                                                                                   PROSITE;
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                                                                                                                                                                                                                                                                                               Pfam;
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                                                                                                                                                                                                                                                                                                                                                                    InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'A sperm membrane
                                                                                                                                                                                                                                                                                                                                                                                                                           send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOT IN LUNG, LIVER, HEART, SPLEEN, BRAIN, KILNEI, DETLUCTION, LIVER, HEART, SPLEEN, BRAIN, KILNEI, DETLUCTION.

DOMAIN: THE MAM DOMAINS PROBABLY MEDIATE SPERM ADHESION TO THE ZONA PELLUCIDA.

DOMAIN: DURING SEERM MIGRATION THROUGH THE REPRODUCTIVE TRACTS, THE MUCIN-LIKE DOMAIN MIGHT INHIBIT INAPPROPRIATE TRAPPING OF SPERMATOZOA OR PROMOTING ADHRSION TO THE OVIDUCTAL ISTHMUS.

DOMAIN: THE VAFD DOMAINS 2 AND 3 MAY MEDIATE COVALENT OLIGOMERIZATION (BY SIMILARITY TO HUMAN INTESTINAL MUCIN MUC2).

PTM: THE MAM DOMAINS AND THE MUCIN-LIKE DOMAINS ARE MISSING FROM THE ZONADHESIN THAT BINDS TO THE EGG EXTRACELLULAR MATRIX. PROCESSING MIGHT OCCUR DURING SPERM MATURATION AND/OR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: CONTAINS 2 MAM DOMAINS. SIMILARITY: CONTAINS 4.5 VWFD DOMAINS. SIMILARITY: CONTAINS 1 EGF-LIKE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBUNIT: PROBABLY FORMS COVALENT OLIGOMERS.
SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN, EXCLUSIVELY ON A
APICAL REGION OF THE SPERM HEAD (BY SIMILARITY).
TISSUE SPECIFICITY: IN TESTIS, PRIMARILY IN HAPLOID SPERMATIDS
NOT IN LUNG, LIVER, HEART, SPLEEN, BRAIN, KIDNEY, EPIDIDYMIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: BINDS IN A SPECIES-SPECIFIC OF THE EGG. MAY BE INVOLVED IN GAMETE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAPACITATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNALING.
                                                                                                                                                                                                                                                   PF00094
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                                                                                                                    ; PS00022; EGF_1;
; PS01186; EGF_2;
; PS00740; MAM_1;
; PS50060; MAM_2;
; Glycoprotein; Tra
                                                                                                                     Glycoprotein;
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IPR001846;
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IPR003328;
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IPR000998;
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181; EGF; 1.
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RESULT 4
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DT 01-APR
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DE Gene 2
GN 20.
OS Herpes
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MEDLINE-92333688; PubMed-1321287;
Albrecht J.-C., Nicholas J., Biller D., Cameron K.R., Biesinger Newman C., Wittmann S., Craxton M.A., Coleman H., Fleckenstein B Honess R.W.;
                                                                                                                                                                                                                                             Viruses; dsDNA viruses, no RNA stage;
Gammaherpesvirinae; Rhadinovirus.
NCBI_TaxID=10383;
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 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                 "Primary structure of the herpesvirus saimiri genome.";
Virol. 66:5047-5058(1992).
-i-SIMILARITY: BELONGS TO FAMILY THAT GROUPS TOGETHER HSV-1 UL24,
EHV-1 37, EBV BXRF1, HCMV UL76, ILTV ORF3, AND VZV 35.
                                                                                                                                                                                                                                                                                              Herpesvirus saimiri (strain 11).
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PIR; B36808; WZBEM6.
InterPro; IPR002580; Herpes_UL24.
Pfam; PF01646; Herpes_UL24; 1.
SEQUENCE 303 AA; 34942 MW; DF
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entities requires a license agreement (See
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                      Isogai T., Ota T., Hayashi K., Sugiyama T., Otsuki T., (Nishikawa T., Nagai K., Sugano S., Aotsuka S., Yoshikawa Matsunawa H., Ishii S., Kawai Y., Saito K., Yamamoto J., Nakamura Y., Nagahari K., Kawai V., Sasaki N.; "NEDO human cDNA sequencing project."; Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                              SEQUENCE OF 6-415 FROM N.A. MEDLINE-20003061; PubMed=10531037; MEDLINE-20003061; PubMed=10531037; Miston J.T., Koepp D.M., Zhu C., Elledge "A family of mammallan F-box proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                             EMBL; AK001943; BAA91991.1; EMBL; AF176702; AAF03702.1; InterPro; IPR001810; F-box.
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                                                                                 Pfam; PF00646; F-box; 1.
SMART; SM00256; FBOX; 1.
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S., Yoshikawa Y.,
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InterPro; IPR002395; Kininogen.
InterPro; IPR003689; Zip.
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Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation updat
Hypothetical Ke4-like protein H13N06.5 in c
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71.4%;
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Pred. No.
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Pred. No. 24;
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-LINKED (GLCNAC. ..) (POTENTIAL)
17D7E854F4E1DAAF CRC64;
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M -> VS (IN REF. 2
F7AA88193E14E67E
                                                                                                                                                                                                                           Glycoprotein.
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5 in chromosome X.
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26;
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2)
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                                                                                                                                                                                                                                                                                                                                   Pfam; PF00629; MAM; 2.
Pfam; PF01826; TIL; 5.
Pfam; PF02345; TILa; 5.
Pfam; PF002345; TILa; 5.
Pfam; PF00094; vwd; 4.
SMART; SM00011; EGF_like; 1.
SMART; SM00214; VWC; 5.
SMART; SM00216; VWD; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF244982; AAF63342.2; -.
InterPro; IPR000561; EGF-1ike.
InterPro; IPR000742; EGF_2.
InterPro; IPR000998; MAM.
InterPro; IPR000998; MIL.
InterPro; IPR002919; TIL.
InterPro; IPR003180; TILA.
InterPro; IPR001007; VWFC.
TRANSMEM
DOMAIN
DOMAIN
                                                                                                                                                                                                                PROSITE; PS00022; EGF_1; 1.

PROSITE; PS01186; EGF_2; 4.

PROSITE; PS00740; MAM_1; FALSE_NEG
PROSITE; PS50060; MAM_2; 2.
                                                                                                                                                                                   Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                            DOMAIN
                                                                                                                             NON_TER
                                                                                                                                                      Repeat.
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"Sequence of rabbit zonadhesin.";
Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: BINDS IN A SPECIES-SPECIFIC MANNER TO THE ZONA PELLUCIDA
OF THE EGG. MAY BE INVOLVED IN GAMETE RECOGNITION AND/OR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZAN_RABIT STANDARD; PKT; 2202 And P57999; 16-0CT-2001 (Rel. 40, Created) 01-MAR-2002 (Rel. 41, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oryctolagus cuniculus (Rabbit).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rissum=Testis;
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ZONAIN: THE MUCINITY SPERM MIGRATION THROUGH THE REPRODUCTIVE TRACTS,

THE MUCINITY DOMAIN MIGRATION TO THE OVIDUCTAL ISTHMUS OF SPERMATOZOA OR PROMOTING ADHESION TO THE OVIDUCTAL ISTHMUS.

SPERMATOZOA OR PROMOTING ADHESION TO THE OVIDUCTAL ISTHMUS.

DOMAIN: THE VWFD DOMAINS 2 AND 3 ANY MEDIATE COVALENT

OLIGOMERIZATION (BY SIMILARITY TO HUMAN INTESTINAL MUCIN MUC2).

SIMILARITY: CONTAINS AT LEAST 2 MAM DOMAINS.

SIMILARITY: CONTAINS 4.5 VWFD DOMAINS.

SIMILARITY: CONTAINS 1 EGF-LIKE DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNALING (BY SIMILARITY).

SUBUNIT: PROBABLY FORMS COVALENT OLIGOMERS (BY SIMILARITY)
SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN, EXCLUSIVELY
APICAL REGION OF THE SPERM HEAD (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR001846;
      2236
2257
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                                                                                                                                                                             Transmembrane; EGF-like domain; Cell adhesion;
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2256
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CYTOPLASMIC (POTENTIAL)
MAM 1.
                                                      EXTRACELLULAR (POTENTIAL)
POTENTIAL.
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                                                                                                 KOTANI E., Iwamoto S.I., Tashiro M., Mori H., Sumida M., Matsubara F., Yamakawa M.;

Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.

-i- FUNCTION: ADHESIVE PROTEIN AND RELATES TO HEMOSTASIS OR ENCAPSULATION OF FOREIGN SUBSTANCES FOR SELF-DEFENSE.

-i- DEVELOPMENTAL STAGE: EXPRESSED IN HEMOCYTES DURING LARVIMETAMORPHOSIS.
                                                                                                                                                                                                                                                                                                                                                                                        Kotani E., Yamakawa M., Iwamoto S.-I., Tashiro M., Mori H., Sumida I Matsubara F., Taniai K., Kadono-Okuda K., Kato Y., Mori H.; "Cloning and expression of the gene of hemocytin, an insect humoral lectin which is homologous with the mammalian von Willebrand factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Lepidoptera; Glossata; DiBombycoldea; Bombycidae; Bombyx.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HMCT_BOMMO STANDARD; PRT; 31
p98092;
01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence up
01-NOV-1997 (Rel. 35, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     воммо
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-FUYOU X TOKAI; TISSUE-Hemocyte; MEDLINE-95178544; PubMed-7873598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hemocytin precursor (Humoral lectin).
Bombyx mori (Silk moth).
                                                                                                                                                                                                                                                                                                           SEQUENCE OF 2221-3133 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                      Biochim.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=7091;
                       INDUCTION: HEMAGGLUTINATION ACTIVITY IS INCREA OR VIRAL INFECTION AND INHIBITED BY D-MANNOSE, GALACTOSAMINE AND D-MALTOSE.
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5; Conserv
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CONVERTED INTO THE 260 kDa
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71.4%;
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łae; Bombyx.
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Pred. No.
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26 X HEPTAPEPTIDE REPEATS (APPROXIMATE)
(MUCIN-LIKE DOMAIN).
VWFD 1 (PARTIAL).
VWFD 2.
VWFD 3.
VWFD 4.
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1.1e+02;
2;
                                                                                  INCREASED BY BACTERIAL
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irPro; IPR002919; TIL.
irPro; IPR001007; VWFC.
irPro; IPR0010846; VwdC.
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irPro; IPR000083; fibronectin.
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Kim Y.S.;
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                                                                                                                                                                                                                  Gum J.R. Jr., Hicks J.W., Toribara N.W., Siddiki B., Kim Y.S.; "Molecular cloning of human intestinal mucin (MUC2) cDNA. Identification of the amino terminus and overall sequence similarity to prepro-von Willebrand factor."; J. Biol. Chem. 269:2440-2446(1994).
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                     SEQUENCE OF 1343-1895 AND 4176-4195 FROM N.A. MEDLINE-91358717; PubMed-1885763;
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         Toribara N.W.,
                                                                      "The human MUC2 intestinal mucin has cysteine-rich subdomains located both upstream and downstream of its central repetitive region."; Biol. Chem. 267:21375-21383(1992).
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PROSITE; PS01208; VWFC; 2.
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-!- SIMILARITY: CONTAINS 2 VWFC DOMAINS.
-!- SIMILARITY: CONTAINS 1 C-TERMINAL CYSTINE KNOT-LIKE DOMAIN (CTCK).
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J. Clin. Invest.
-!- FUNCTION: COA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGENTS AT MUCOSAL SURFACES.
SUBUNIT: MULTIMERIC.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: COLON, SMALL INTESTINE, COLONIC TUMORS,
BRONCHUS, CERVIX AND GALL BLADDER.
PTM: ALL CYSTEINE RESIDUES ARE INVOLVED IN INTRACHAIN OR
INTERCHAIN DISULFIDE BONDS (BY SIMILARITY).
POLYMORPHISM: THE NUMBER OF REPEATS IS HIGHLY POLYMORPHIC AND
VARIES AMONG DIFFERENT ALLELES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Din. Invest. 88:1005-1013(1991).

FUNCTION: COATS THE EPITHELIA OF THE INTESTINES, AIRWAYS, AND OTHER MUCUS MEMBRANE-CONTAINING ORGANS. THOUGHT TO PROVIDE A PROTECTIVE, LUBRICATING BARRIER AGAINST PARTICLES AND INFECTIOUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; IPR000359; Cys_knot.; IPR000561; EGF-11ke.; IPR002400; GF_Cysknot.; IPR001007; VWFC.; IPR001846; Vwd.
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            SEQUENCE FROM N.A. MEDLINE-96424990; PubMed-8827441; Pham T.N., Hayashi K., Takano R.,
                                                              NCBI_TaxID=7091;
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Itoh M., Takenaka T., Ashikari T., Eguchi M.;
"CDNA cloning and expression of a novel type
(FPI-F) from the silkworm, Bombyx mori.";
J. Sericultural Sci. Jpn. 65:326-333(1996).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "A new family of serine protease inhibitors (Bombyx family) established from the unique topological relation between the positions of disulphide bridges and reactive site.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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EMBL; D38075; BAA22409.1;
InterPro; IPR002919; TIL.
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                                                                                                                                                                                                                                                                                                                            PEX2_RAT STANDARD; PRT; 305 AA P24392; 063733; 01-MAR-1992 (Rel. 21, Created) 01-MAR-1992 (Rel. 21, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation updat
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                                                                                                                                                                                     Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                         protein 3).
PXMP3 OR PEX2 OR PAF1 OR PMP35
                   STRAIN-SPRAGUE-DAWLEY:
MEDLINE-91163637; PubMed=1750930;
Tsukamoto T., Miura S., Fujiki Y.;
"Restoration by a 35K membrane pro"
peroxisome-deficient mammalian
                                                                                                                                                                                                                                                                                                     Peroxisome assembly factor-1 (PAF-1) (Peroxin-2) (Peroxisomal membrane
                                                                                                                   SEQUENCE FROM N.A
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                                                                                                                                                                                           Powell-Coffman J.A., Firtel R.A.; "Characterization of a novel Dictyostelium discoideum prespore-specific gene, PspB, reveals conserved regula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
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                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                                                                                              Development 120:1601-1611(1994).
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     the European Bioinformatics Institute.
                                                                                                                                                                               sequences.'
                                                                                                                                                                                                                                                                                     MEDLINE=94326657; PubMed=8050366;
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Mycetozoa; Dictyosteliida; Dictyostelium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dictyostelium discoideum (Slime mold).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X57988; CAA41054.1; -. EMBL; D30616; BAA06306.1; -. EMBL; D30617; BAA06307.1; -. PIR; S14290; S14290.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prespore protein B precursor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Tsukamoto T., Shimozawa N., Fujiki Y.;

"Peroxisome assembly factor 1: nonsense mutation in a peroxisome-
deficient Chinese hamster ovary cell mutant and deletion analysis."

MOI. Cell. Biol. 14:5458-5455(1994).

-I- FUNCTION: SOMEWHAT IMPLICATED IN THE BIOGENESIS OF PEROXISOMES.

-I- SUBCELLULAR LOCATION: Integral membrane protein. Peroxisomal.

-I- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=94309666; PubMed=8035823;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nature 350:77-81(1991).
[2]
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mes 5; Conserv
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0 159 POTENTIAL.
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83.3%;
                                                                                                                 PRESPORE MOTIFS.
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RING-TYPE.
R -> P.
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249058A5A5A8E854 CRC64;
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RESULT 13
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                                                       InterPro; IPR000601; PKD
Pfam; PF00801; PKD; 1.
SMART; SM00089; PKD; 1.
PROSITE; PS50093; PKD; 1.
                                                                                                                                                                                                                                                       "The cDNA RPE1 and monoclonal antibody HMB-50 define gene products preferentially expressed in retinal pigment epithelium."; Exp. Eye Res. 55:657-662(1992).
-!- FUNCTION: COULD BE A MELANOGENIC ENZYME (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: Type I membrane protein (Potential).
-!- TISSUE SPECIFICITY: RETINAL PIGMENT EPITHELIUM.
-!- TISSUE SPECIFICITY: RETINAL PIGMENT EPITHELIUM.
-!- SIMILARITY: BELONGS TO THE PMEL-17/NMB FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PM17_BOVIN
Q06154;
Q1-NOV-1997
                                                                                                                                                  entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation between Bioinformatics Institute. There are no restrictions on its
                                      Transmembrane; Glycoprotein; Melanin biosynthesis; Repeat
                                                                                                                 EMBL; M81193; AAA30419.1;
                                                                                                                                           or send an email to license@isb-sib.ch).
 TRANSMEM
                DOMAIN
                              NON_TER
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01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation updat
Melanocyte protein Pmel 17 (Retinal pigment
protein) (Fragment).
SILV OR PMEL17 OR RPE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SM00274; FOLN; 1.
Glycoprotein; Repeat; Sporulation; Signal.
SIGNAL 1 19 POTENTIAL.
CHAIN 20 379 PRESPORE PROT
REPEAT 24 236 PRESPORE MOTI
REPEAT 289 301 PRESPORE MOTI
REPEAT 319 331 PRESPORE MOTI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; S72639; AAC60506.1; -. DictyDb; DD02053; pspB.
                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=93122163; PubMed=1478275;
                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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IPR003645; Folw.
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 423
444
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57.1%;
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          EXTRACELLULAR (POTENTIAL).
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Pred. No.
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PRESPORE MOTIF 2.
PRESPORE MOTIF 3.
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Best Local S
Matches
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PM17_HUMAN STANDARD; PRT; 661 AA.
PA0967; 016565; Q14817; Q12763; Q14448;
01-FEB-1995 (Rel. 31, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Melanocyte protein Pmel 17 precursor (Melanocyte lineage-specific antigen GP100) (Melanoma-associated ME20 antigen) (ME20M_ME20S)
(ME20-M_ME20-S) (95 kDa melanocyte-specific secreted glycoprotein)
SILV OR PMEL17 OR D12S53E.
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SEQUENCE
                                                                                                                                                                                                                                                   MEDLINE=94327568; PubMed=7519602; Adema G.J., de Boer A.J., Vogel A.M., Loenen W.A., Figdor C.G.; Molecular characterization of the melanocyte lineage-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Ve
Mammalia; Eutheria; Primates; Catarrhini;
NCBI_TaxID=9606;
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DOMAIN
antigen.";
DNA Cell Biol. 13:87-95(1994)
                     Maresh G.A., Marken J.S., Neubauer M., Hellstroem K.E., Marquardt H.; "Cloning and expression of the gene for antiden.";
                                                                        SEQUENCE FROM N.A., MEDLINE=94235165; Po
                                                                                                                                                                                                                                        antigen gp100."
                                                                                                                                                                                                                                                                                                                                               chromosome 12.";
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Gilbert D.J., Jenkins N.A.,
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                                                                                                                    "Genomic organization and sequence of D12S53E homologue of the mouse silver (si) locus.";
J. Invest. Dermatol. 106:24-27(1996).
                                                                                                                                                                             MEDLINE=96154052;
                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                            J. Biol.
                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                             "A melanocyte-specific gene,
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                                                                                                                                                               T., Lee S.T., Spritz R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 5; Conserv
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                                                                       Pubmed=8179825;
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maneni C., Kozak C.A.,
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Pred. No. 40;
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and is ir
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Francke U.,
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                             melanoma-associated ME20
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                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                               SIGNĀL
                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                    MIM; 155550;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted -!- FUNCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (JAN-1996)
                                                                                                                                                                                                                                                                                                                                             Antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vogel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SIMILARITY: CONTAINS 1 PKD DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IS ALSO A SECRETED SOLUBLE FORM, ME PROTEOLYTIC CLEAVAGE.
TISSUE SPECIFICITY: PREFERENTIALLY EXPRESSION WAS FOUND IN DYSPLASTIC TISSUES NOR IN CARCINOMAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mitted (NOV-1990) to the EMBL/GenBank/DDBJ databases.
FUNCTION: COULD BE A MELANOGENIC ENZYME. COULD REPRESENT AN ONCOFETAL SELF-ANTICEN THAT IS NORMALLY EXPRESSED AT LOW LEVELS QUIESCENT ADULT MELANOCYTES BUT OVEREXPRESSED BY PROLIFERATING USEANTAL MELANOCYTES BUT OVEREXPRESSED BY PROLIFERATING NEONATAL MELANOCYTES AND DURING TUMOR GROWTH. RELEASE OF THE SOLUBLE FORM, ME20-S, COULD PROTECT TUMOR CELLS FROM ANTIBODY MEDITATED IMMUNITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: TYPE IS ALSO A SECRETED SOLUBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       M77348; AAA60121.1; S73003; AAC60634.1; S73003; AAC60634.1; U31799; AAB00386.1; U31808; AAB00386.1; U31797; AAB00386.1; U31798; AAB00386.1; U31798; AAB00386.1; U31798; AAB00386.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                               U01874; AAA18479.1;
U20093; AAB19181.1;
U19491; AAB19181.1;
M32295; AAA35930.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B.S., Kim K., Heng H.H., B., Pickard R.T.;
                                                                                                                                                                                                                                                                                                                                                                                                      PF0080
                                                                                                                                                                                                                                                                                                                                                                                         SM00089; PKD;
                                                                                                                                                                                                                                                                                                                                                                          PS50093;
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                                                                                                                                                                                                                                                                                                                                                            Glycoprotein;
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                                                                                                                                                                                                                                                                                                                                                                          PKD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           license agreement
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EXTRACELLULAR
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                                                                                                                                                                                                                                                                                     POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I MEMBRANE PROTEIN (POTENTIAL). THERE FORM, ME20-S, PROBABLY PRODUCT OF
                                                                                                                                                                                                                                       X 13 AA APPROXIMATE TANDEM REPEATS
 (IN
               (GLCNAC.)
(GLCNAC.)
(GLCNAC.)
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NEVI. NOT
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LAR (POTENTIAL).
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Matches 5
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P91620;
15-JUL-1999 (Rel. 3
15-JUL-1999 (Rel. 3
01-MAR-2002 (Rel. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Musc
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sone M., Hoshino M., Suzuki E., Kuroda S., Kaibuchi K., Nakagoshi H., Saigo K., Nabeshima Y.-I., Hama C.; Science 275:1405-1405(1997).
-i- FUNCTION: RECULATES SYNAPTIC DIFFERENTIATION THROUGH THE ORGANIZATION OF ACTIN CYTOSKELETON POSSIBLY BY ACTIVATING RHO-LIKE GPPASES. IS LIKELY A FACTOR IN THE CASCADE OF RAC1 OR CDC42 IN THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Saigo K., Nabeshima Y.-I., Hama C.; "Still life, a protein in synaptic terminals to GDP-GTP_exchangers.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Still life protein type 2 (SIF type 2).
                                                        EMBL; D86546; BAA1: HSSP; P08567; 1PLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ERRATUM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sone M., Hoshino M., Suzuki E., Kuroda S., Kaibuchi K., Nakagoshi H., Saigo K., Nabeshima Y.-I., Hama C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                               FlyBase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Science 275:543-547(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-97153054; PubMed-8999801;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 296 IPLTSC 301
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nes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                  ATTERNATIVE PRODUCTS: 2 ISOFORMS; SIF TYPE 1 (AC P91621) AND TYPE 2 (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING. DEVELOPMENTAL STAGE: AT STAGE 14, EXPRESSION OCCURS IN EACH SEGMENT OF THE CENTRAL NERVOUS SYSTEM. AT STAGE 17, EXPRESSIC BECOMES RESTRICTED TO THE SYNAPTIC REGIONS OF THE BRAIN AND VENTRAL NERVE CORD, WHERE SYNAPESS UNDERGO MATURATION. SIMILARITY: CONTAINS 1 DBL-HOMOLOGY DOMAIN (DH). SIMILARITY: CONTAINS 1 PDZ/DHR DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBCELLULAR LOCATION: LOCALIZES TO THE SUBMEMBRANOUS REGION OF SYNAPTIC TERMINALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NEURONS.
     FBgn0019652; sif.; IPR001331; GDS_C
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                                                                                  BAA13108.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
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592
597
661
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83.3%;
     GDS_CDC24
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Q -> GG (IN REF. 1).

P -> R (IN REF. 1).

RIFCSCPICENSPLLSGQQV -> ASSALVPLVRIAPSSVG

SRSEYSHMML (IN REF. 6).

SRSEYSHMML (IN REF. 6).
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Pred. No. 52;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
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52;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brachycera; Muscomorpha;
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Matches 5
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SMART; SM00233; PH; 2.
SMART; SM00455; RBD; 1.
SMART; SM00325; RhoGEF; 1.
SMART; SM00325; RhoGEF; 1.
PROSITE; PSS0010; DH_2; 1.
PROSITE; PSS00741; DH_1; 1.
PROSITE; PSS0106; PDZ; 1.
PROSITE; PSS0003; PH_DOMAIN; 1.
                                                                                                                                                                                                                                                                                InterPro; IPRO01478; PDZ.
InterPro; IPRO01849; PH.
InterPro; IPR003116; RBD.
InterPro; IPR000219; RhoGEF.
Pfam; PF00595; PDZ; 1.
Pfam; PF00196; PBJ; 2.
Pfam; PF00196; RBD; 1.
Pfam; PF001961; RhoGEF; 1.
                                                                                        DOMAIN
                                                                                                         DOMAIN
DOMAIN
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DOMAIN
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REPEAT
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                                                                                                                        DOMAIN
                                                                                                                                  DOMAIN
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                                                                                                                                                                                                         Guanine-nucleotide releasing
                                                                        SEQUENCE
                                                                                  DOMAIN
502 CAPLISC 508
               1 CVPLTSC 7
                                                                                                                                                                         Alternative: 62 2: 62 62 94 1:
                                Similarity 71.55; Conservative
                                                                                                                154
225
819
1184
1408
1674
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1898
1929
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178
249
937
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1602
1767
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1298
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                                       76.28;
                                                                         228324
                               Score 32;
Pred. No.
0; Mismatc
                                                                         MW;
                                                                                        PH 1.
PDZ.
DH.
PH 2.
POLY-PRO.
POLY-PRO.
POLY-PRO.
POLY-GLN.

    factor; Developmental protein;

                                                                               POLY - PRO
                                                                                                                                                                                         4 X 25
                               ore 32; DB 1; Leed. No. 1.5e+02; Mismatches 2;
                                                                         75D7CF21F49654B6 CRC64;
                                                                                                                                                                                         AA APPROXIMATE REPEAT
                                               Length 2044;
                                 0
                                                                                                                                                                                                        Synapse;
                                 Gaps
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Search completed: June 17, 2002, 16:24:30 Job time: 1559 sec

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Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                          Database :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw model
SPTREMBL_19:*

1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
4: sp_human:*
5: sp_inverteb
6: sp_mammal:*
7: sp_mhc:*
8: sp_organel:
9: sp_phage:*
10: sp_plant:*
11: sp_verteb
11: sp_verteb
13: sp_verteb
13: sp_verteb
14: sp_uclass
15: sp_bacteri
16: sp_bacteri
17: sp_archea[
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            June 17, 2002, 16:23:40 ; Search time 172.85 Seconds (without alignments) 7.006 Million cell updates/sec
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42
1 CVPLTSC 7
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Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                       sp_archea:*
sp_bacteria:*
sp_fungi:*
sp_human:*
sp_invertebrate:*
sp_mammal:*
                                                                                                                           sp_organelle:*
sp_phage:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
                                                                              sp_rodent:*
sp_virus:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

16	15	14	13	12	11	10	9	8	7	σ	υī	4	ω	2	ш	Result
34	34	34	34	35	35	35	35	35	35	36	36	36	36	38	39	Score
81.0	81.0	81.0	81.0	83.3	83.3	83.3	83.3	83.3		85.7	85.7	85.7	85.7	90.5	92.9	Query Match
2843	1513	1506	88	3680	1637	727	462	389	193	2533	2533	980	337	127	2543	Length DB
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Q9Y6R7	Q62635	P79927	Q9VJX0	Q9VR08	8ASX60	Q28161	Q9СХМ8	097887	Q90993	P90589	Q27183	024780	018464	Q9GMW9	P90649	ID
Q9y6r7 homo sapien	Q62635 rattus norv	P79927 xenopus lae	Q9vjx0 drosophila	Q9vr08 drosophila	Q9xsv8 bos taurus	Q28161 bos taurus	Q9cxm8 mus musculu	097887 bos taurus	Q90993 gallus gall	P90589 paramecium	Q27183 paramecium	024780 clostridium	O18464 herdmania m	Q9gmw9 macaca fasc	P90649 paramecium	Description

RESULT

N

Q9p1k3 homo sapien	_	85	76.2	32	45
018843 oryctolagus	6 018843	75	76.2	32	44
Q9ptm3 gallus gall	13 Q9PTM3	68	76.2	32	3
097500 oryctolagus	6 097500	68	76.2	32	2
		66	76.2	32	41
Q91xf4 arabidopsis		1227	78.6	33	0
		924	78.6	<b>ω</b>	39
Q9shg9 arabidopsis		891	78.6	33	38
Q21573 caenorhabdi	5 Q21573	647	78.6	33	37
		644	78.6	ω ω	36
		644	78.6	ω ω	35
Q9d2j5 mus musculu		480	78.6	ω ω	34
3 mus	11 Q9DC63	480.	78.6	ω ω	33
homo	4 Q9H0V2	471	78.6	33	32
homo	o	427	78.6	33	31
mus		415		<b>ω</b>	30
Q91vi9 mus musculu	11 Q91VI9	367	78.6	33	29
		303		<b>ω</b>	28
_	12 040640	303		33	27
Q64507 mus musculu		230		33	26
Q62220 mus musculu	11 Q62220	223		33	25
Q9ndk2 leishmania	0	220		ω	24
Q9zm78 helicobacte	16 Q9ZM78	207		33	23
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g,		196		33	21
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Q91f35 cydia pomon	12 Q91F35	101	78.6	33	81
Q38989 arabidopsis		55		33	۲7

## ALIGNMENTS

Qu Be Ma	SQ	DR DR	22 25	R	RL	מ א	RA	RX	RC	RΡ	RN	0 X	გ	8	SO	DE	딬	DΤ	DT	AC	Ħ	P90649
Query Match 92.9%; Score 39; DB 5; Length 2543; Best Local Similarity 71.4%; Pred. No. 11; Matches 5; Conservative 2; Mismatches 0; Indels 0; Gaps 0; 1 CPPLTSC 7 1 :::   1	Serine protease inhibitor. SEQUENCE 2543 AA; 267041 MW; 828EF797CB012902 CRC64;	Prints; PR01508; Paramecium_SA; 19. Prints; PR00759; BASICPTASE.	InterPro; IPR002223; Kunitz_BPT1. InterPro; IPR002895; Paramecium_SA.	EMBL; X96616; CAA65436.1;	J. Eukaryot. Microbiol. 43:303-314(1996).	"MOLECULAR Characterization of the D surface protein gene subsamily in		MEDLINE=96313351; PubMed=8768434;	STRAIN-156;	SEQUENCE FROM N.A.	[1]	NCBI_TaxID=5886;	Paramecium.		Paramecium primaurelia.	ANTIGEN.	(TrEMBLrel. 19, Last	01-MAY-1997 (TrEMBLrel. 03, Last sequence update)	01-MAY-1997 (TrEMBLrel. 03, Created)	P90649;	P90649 PRELIMINARY; PRT; 2543 AA.	4.9

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Best Local Similarity
Matches 6; Conserv
                                                                                                  Matches
                                                                                                                                                                                                                                                                              "A novel gene containing multiple EGF-like motifs transiently expressed in the papillae of the ascidian tadpole larvae."; Dev. Dev. Dev. 0:0-0(1997).
EMBL; U82540; AAB67704.1; -.
InterPro; IPR000561; EGF-like.
InterPro; IPR002919; TIL.
InterPro; IPR002919; TIL.
SMART; SM00181; EGF; 4.
SMART; SM00181; EGF; 4.
Signal; Hypothetical protein.
SIGNAL 1 18 POTENTIAL.
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018464;
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01-MAR-2001 (TIEMBLrel. 16, Last sequence update)
01-MAR-2001 (TIEMBLrel. 16, Last annotation update)
01-MAR-2001 (TIEMBLrel. 16, Last annotation update)
HYPOTHETICAL 13.0 KDA PROTEIN.
Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=CURVATA;
Arnold J.M., Eri R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stolidobranchia;
NCBI_TaxID=7733;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Urochordata; Stolidobranchia; Pyuridae; Herdmania.
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01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
HYPOTHETICAL 35.6 KDA PROTEIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      libraries.";
Submitted (AUG-2000) to the EMBL/GenBank/DDBJ
EMBL; AB047606; BAB12130.1; -.
Hypothetical protein.
SEQUENCE 127 AA; 12961 MW; EE1685252569920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Osada N., Hida M., Kusuda J., Tanuma R., Iseki K., Hirai M., Suzuki Y., Sugano S., Hashimoto K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9GMW9;
01-MAR-2001
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199 CVPISSC 205
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                           1 CVPLTSC 7
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                                                                                                  Similarity 71. 5; Conservative
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337 AA;
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                                                                                                                        Score 36; DB 5; Pred. No. 7.7;
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Pred. No. 1.
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Best Local Similarity
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SEQUENCE FROM N.A.
STRAIN=ATCC27405;
STRAIN=ATCC27405;
Kawaguchi T., Ikeuchi Y., Tsutsumi N., Kan A., Sumitani J., Arai P.
Cloning, nucleotide sequence, and expression of the Clostridium thermocellum cellodextrin phosphorylase gene and its application synthesis of cellulase inhibitors.";
J. Ferment. Bloeng. 85:144-149(1998).
EMBL; AB006822; BAA22081.1; -.
STOUENCE 980 AA; 111183 MW; 8A8C8EE3F5370831 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           024780;
01-JAN-1998
01-JAN-1998
01-DEC-2001
 2149
                                                                                                      Interpro; IPR002223; Kunitz_BPTI.
Interpro; IPR002895; Paramecium_SA.
Pfam; PF01508; Paramecium_SA; 22.
PRINTS; PR00759; BASICPTASE.
Serine protease inhibitor.
SEQUENCE 2533 AA; 263996 MW; 26
                                                                                                                                                                                                                                                                                                                   Q27183
Q27183;
Q1-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                    Paramecium tetraurelia Eukaryota; Alveolata;
                                                                                                                                                                           Submitted (MAR-1995) to the EMBL/GenBank/DDBJ databases. EMBL; X85135; CAA59447.1; -.
                                                                                                                                                                                                               STRAIN-51
                                                                                                                                                                                                                          SEQUENCE FROM
                                                                                                                                                                                                                                                             Paramecium
                                                                                                                                                                                                                                                                                               ALPHA-51D-GENE.
                                                                                                                                                                                                                                                                                                          ALPHA-51D-IMMOBILIZATION
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                                                                                                                                                                                                    Schmidt H.J.;
                                                                                                                                                                                                                                                NCBI_TaxID=5888;
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                    1 CVPLTSC
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IN PHOSPHORYLASE.
                                            Conservative
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57.1%;
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57.1%;
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19, Last annotation updat
ANTIGEN.
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                                                        Score 36;
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RESULT P90589

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EMBL; x96400; CAA65264.1; -

DR InterPro; IPR002223; Kunitz_BPTI.

7 InterPro; IPR002895; Paramecium_SA.

7 Pfam; PF01508; Paramecium_SA; 21.

8 PRINTS; PR00759; BASICPTASE.

9 Serine protease inhibitor.

9 Serine protease inhibitor.

9 SEQUENCE 2533 AA; 264142 Mu. ---
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Best Local S
Matches 5
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Best Local
                                                                                                                                        InterPro; IPR000980; SH2.
InterPro; IPR001452; SH3.
Pfam; PF00017; SH2; 1.
Pfam; PF00018; SH3; 1.
PRINTS; PR00452; SH3DOMAIN.
SMART; SM00252; SH2; 1.
SMART; SM00326; SH3; 1.
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01-NOV-1996 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                       PROSITE: PS50001; SH2; 1.
PROSITE: PS50002; SH3; 1.
SEQUENCE 193 AA; 21180
                                                                                                                                                                                                                                                                       in chicken skeletal muscle.";
Mol. Cell. Biol. 10:4068-4079(1990).
EMBL, M57299; AAA49078.1; -.
HSSP; P00523; 1SRL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                            Doral T., Wang L.-H.;
Doral T., Wang L.-H.;
"An alternative non-tyrosine protein kinase
                                                                                                                                                                                                                                                                                                                                                                                TISSUE=PECTORALIS MUSCLE;
MEDLINE=90318371; PubMed=2115117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PP60C-SCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2149 CIPITNC 2155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Alveolata; Paramecium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALPHA-51D.

Paramecium tetraurelia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAY-1997 (TIEMBLIEL 03,
01-MAY-1997 (TIEMBLIEL 03,
01-DEC-2001 (TIEMBLIEL 19,
ALPHA-51D IMMOBILIZATION AN
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PP60C-SCR PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q90993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=5888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P90589
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 57.1 tes 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CVPLTSC
   Similarity
5; Conserv
 83.3%; ilarity 71.4%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
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57.1%;
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01,
19,
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                                                                                           Ψ¥.
Score 35; DB Pred. No. 7.7; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last sequence update)
Last annotation update)
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Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                           9D1BE54C33B02D98
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                                     DB 13;
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                                                                                                                                                                                                                                                                                                                                            product
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                                                                                           CRC64;
                                 Length 193;
                                                                                                                                                                                                                                                                                                                                              of.
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Gaps
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0;
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QΥ
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RESULT
097887
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Best Local S
Matches 5
                                                                                                                                                                                                                                         Q9CXM8 PRELIMINARY;
Q9CXM8;
Q1_JUN-2001 (TrEMBLrel. 17,
01_JUN-2001 (TrEMBLrel. 17,
01_DEC_2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O97887 PRELIMINARY; PRT; 389 AA.
O97887;
O1-MAY-1999 (TrEMBLrel. 10, Created)
O1-MAY-1999 (TrEMBLrel. 10, Last sequence update)
O1-JUN-2001 (TrEMBLrel. 17, Last annotation update)
REISSNER'S FIBER GLYCOPROTEIN I (FRAGMENT).
SEQUENCE FROM N.A.

STRAIN-C57BL/6J; TISSUE-EMBRYONIC HEAD;

MEDLINE-2108560; PubMed-11217851;

Kawai J., Shinagawa A., Shibata K., Yoshino M.,

Arakawa T., Hara A., Fukunishi Y., Konno H., Ada

Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kond

Saito T., Okazaki Y., Gojobori T., Bono H., Kasu
                                                                                                                                       Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
                                                                                                                                                                                                            3110056H04RIK PROTEIN.
3110056H04RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF01826; TIL; 1.
Pfam; PF00090; tsp_1; 1.
SMART; SM00001; EGF_like; 1.
SMART; SM00209; TST1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Partial sequencing of Reissner's cell Tissue Res. 292:239-250(1998) EMBL, AF078930; AAD17695.1; -. HSSP; P56682; 1CCV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=SUBCOMMISSURAL ORGAN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bovidae; Bovinae; Bos.
NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rodriguez E.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nualart F., Hein S.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [nterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                        311 CVPVSSC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PS00261; GLYCO_HORMONE_BETA_1; UNKNOWN_1. PS50092; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR000561; EGF-like.
IPR001545; Glyco_hormone_beta.
IPR002919; TIL.
IPR002984; TSP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 389 AA; 40720 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   191
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83.3%;
71.4%;
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                                                                                                                                                                                                                                             Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 14;
                                                                                                                                                        Craniata; Vertebrata; Euteleosto Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48571E1F16F9F1B6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zarraga A.M., Araya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fiber glycoprotein I (RF-Gly I).";
                                                                                                                                                                                                                                                                                                                   462
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                                                                                                                                                                                                                                                                                                                   A
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                , Adachi J
Kondo S.,
                                                                                                                                                                                                                                             update)
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                                                  Itoh
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     J., .
e , Yamanak
eai
                                                                                                                                                                            Euteleostomi;
                                                  Ξ.
                Fukuda
Tamanaka
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RESULT
C28161
ID 288161
OT 01
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q28161; PRELIMINARY;
Q28161; TremBlrel. 01,
01-NOV-1996 (TremBlrel. 01,
01-DEC-2001 (TremBlrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00214; VWC; 2.
SMART; SM00216; VWD; 1.
PROSITE; PS01208; VWFC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF01826; TIL; 1.
Pfam; PF00093; vwc; 2.
Pfam; PF00094; vwd; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Desmosomes and cytoskeletal architecture in epithelial differentiation: cell type-specific plaque components and intermediate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD: MGI:1920480; 3110056H04R1k. Interpro; IPR001845; VII. Interpro; IPR001845; VMG. Interpro; IPR001007; VWFC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Functional annotation of a full-length mouse cDNA collection.", Nature 409\!:\!685\!-\!690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wynshaw-Boris
                                    "Cell type-specific desmosomal plaque proteins of the plakoglobin family: plakophilin 1 (band 6 protein)."; Différentiation 58:113-131(1994).
EMBL; Z37975; CAA86029.1; -.
                                                                                                                                                                                    Franke W.W.;
                                                                                                                                                                                                                  Winter-Simanowski S., Stumpp S., Keith M., Figge U.,
                                                                                                                                                                                                                                                   Heid H.W., Schmidt A.,
                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE-95196971; PubMed-7890138;
                                                                                                                                                                                                                                                                                                                                                                                                   filament anchorage.
Eur. J. Cell Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heid H.W., Schmidt A., Zimbelmann R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=95237210; PubMed=7720719;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLAKOPHILIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hayashizaki Y.;
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       interPro;
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nes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P00214; 1FTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   462 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     вав29213.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.3%;
71.4%;
                                                                                                                                                                                                                                                   Zimbelmann R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5B6AF92A52D7A4B6 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                727
                                                                                                                                                                                                                                                       Schaefer S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schaefer S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11;
17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Franke W.W.,
                                                                                                                                                                                                                     Schnolzer M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
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RESULT
Q9VR08
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Q9XSV8
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DR
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Best Local
                                                                                                                                Best Local Similarity Matches 5; Conserv
                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                    Pfam; PF00007; Cys_knot; 1.
Pfam; PF01826; TIL; 5.
Pfam; PF00090; tsp_1; 11.
SMART; SM00041; CT; 1.
SMART; SM00001; EGF like; 1.
SMART; SM00006B; GHB; 11.
SMART; SM00209; TSP1; 11.
SMART; SM00214; VWC; 2.
Q9VR08;
Q9VR08;
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1999 (TrEMBLrel. 12, 01-NOV-1999 (TrEMBLrel. 12, 01-DEC-2001 (TrEMBLrel. 19, SCO-SPONDIN (FRAGMENT).
                                                                                        1206 CVPVSSC 1212
                                                                                                                                                                                                 PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS00261; GLYCO_HORMONE_BETA_1; UNKNOWN_2
PROSITE; PS50092; TSP1; 11.
PROSITE; PS01208; VWFC; UNKNOWN_1.
NON_TER 1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS50176; ARM_REPEAT; SEQUENCE 727 AA; 80180 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pfam; PF00514; Armadillo_seg;
SMART; SM00185; ARM; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                      "Characterization of cattle Submitted (MAR-1999) to the EMBL; AJ133488; CAB46239.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8ASX60
                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000561;
                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gobron S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCO-SPONDIN.
                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                             InterPro;
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                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                             HSSP; P56682;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                            1 CVPLTSC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CVPLTSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
6; Conserv
                                                                                                                                                                                                                                                                                                                                          IPR000884; TSP1.
IPR001007; VWFC.
                                                                                                                                                                                                                                                                                                                                                                IPR000359; Cys_knot.
IPR000561; EGF-like.
IPR001545; Glyco_hormone_beta
IPR002919; TIL.
                                                                                                                                                                                         1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Creveaux I., Didier R., Meiniel R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                  Conservative
                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                              1CCV.
                                                                                                                                                                                         AA;
                                                                                                                                             83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83.3%;
85.7%;
                                                                                                                                                                                         173347 MW; 4C5BAB1DD346C925 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                            SCO-spondin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                  2
                                                                                                                                             Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.
3A27979279BCCEDF CRC64;
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                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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                                 3680 AA
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25;
                                                                                                                                              51;
                                                                                                                                                        DB 6;
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(TrEMBLrel.

13, 13,

Created)

Last sequence update)

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RA Ballew R. M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L. B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L. B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L. B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Lidang Y., Lin X.,
RA Merkulov G., Milshina N.Y., Mobarry C., Morris J., Moshrefi A.,
RA Merkulov G., Milshina N.Y., Mobarry C., Morris J., Moshrefi A.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Rainzzolo M., Pitman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Rainzzolo M., Pitman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Rainzzolo M., Pitman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Rainz K., Tector C., Stapleton M., Skupskin M.P., Smith T.,
RA Syler E., Sten H., Wooldage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Yelson S.M., Wooldage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Yelson S.M., Wooldage T., Worley K.C., Wu D., Zhang J., Zhao Q., Zheng L.,
RA Yelson S.R., Welson G.M., Venter J.C.,
RT Shao Q., Zheng L.,
RA Merkin W., Shao Q., Zheng L.,
RA Merkin W., Shao Q., Zheng L.,
RA Yelson S.R., Welson S., Shao Q., Zheng L.,
RA Yelson S.R
                                                                                                                                                                                                                                                                                                        FlyBase; FBgn0000488; dp.
Interpro; IPR000152; Asx_h;
Interpro; IPR002899; EB;
Interpro; IPR000561; EGF-1.
Interpro; IPR001881; EGF_C;
PROSITE; PS00010; ASX_HYDROXYL; 18
PROSITE; PS00022; EGF_1; 1.
PROSITE; PS01186; EGF_2; 18.
PROSITE; PS01187; EGF_CA; 17.
Calcium-binding; EGF-11ke domain;
SEQUENCE 3680 AA; 388637 MW; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D. Brandon R.C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.
                                                                                                                                  SMART; SM00001;
SMART; SM00274;
SMART; SM00289;
                                                                                                                                                                                              ProDom; PD003
SMART; SM0017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20196006; PubMed=10731132;
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                                                                                                                                                                                                                                           Pfam; PF0000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OR CG15637
                                                                                                                                                                                                                                                                                                                                                                                                                      P35555;
                                                                                                                                                                                                                                                                                                                                                                                                                                      AE003576; AAF51000.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
                                                                                                                                                                                                                   ro; IPR003645; Fo
PF00008; EGF; 24.
; PD003573; ET; 1
                                                                                                                                                                                                                                                                                      IPR002603;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                melanogaster (Fruit fly)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metazoa; Arthropoda;
                                                                                                                  79; EGF_CA; 16.
71; EGF_like; 35.
4; FOLN; 5.
1; WR1; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                      1EMN
                                                                                                                                                                                                                                                                                                                            ; Asx_hydroxyl.
; EB.
; EGF-like.
                                                                                                                                                                                                                                                                FolN.
                                                                                                                                                                                                                                                                                                        EGF_Ca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tracheata; Hexapoda; Insecta;
Glycoprotein; Hydroxylation; E5E972E1A3479EFF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Champe M., Pfeiffer B.D., velson C.R., Miklos G.L.G.,
                        Repeat
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Query Match
Best Local Similarity
""" 6 Conserv
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Q9VJX0
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                                                                                                         RA Ballew R.M. Basu A., Baxendale J. Bayraktaroglu L. Beasley E.M.,
RA Beeson K.Y. Benos P.V. Berman B.P. Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
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RA Durbin K.J., Evangelista C.C., Ferriac C., Ferriera S., Fleischmann W.,
RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Wei M.-H., Ibeywam C.,
RA Harris N.L., Harvey D., Heiman T.J., Wei M.-H., Ibeywam C.,
RA Harris N.L., Harvey D., Heiman T.J., Wei M.-H., Ibeywam C.,
RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merialov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Melson D.R., Nelson K.A., Nuoskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Rimel B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Sihen H.,
RA Shue B.C., Siden-Kiamos I., Sinpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Syliskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
RA Zheng X.H., Moodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Zhense, Engolo2407; B4.
Schence 287.2185-2195/2000).
REMBL, Aecolo3640; AAF53317.1; -.

RABOLSCHER R. RABOLSCHE B. RAB.; 2989 MW; 27A8C83F4D40F346 CRC64;
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Best Local
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Q1-MAY-2000 (Tre
Q1-MAY-2000 (Tre
Q1-DEC-2001 (Tre
CG9260 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S., Aburner M., Henderson S.N.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Abril J.F., Agbayani A., An H.-J., Andrews Pfannkoch C., Baldwin D.,
Ballur P. R. Rogers M. B. A., An H.-J., Andrews Pfannkoch C., Baldwin D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CG9260.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=20196006; PubMed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-BERKELEY
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"Similaritles of integumentary mucin B.
and preproroun Willebrand factor at the
J. Biol. Chem. 272:1805-1810(1997).
EMBL; Y08296; CAA69604.1; -.
InterPro; IPR000436; Sushi_SCR_CCP.
InterPro; IPR002219; TIL.
InterPro; IPR0021846; Vwd.
Pfam; PF01826; TIL; 1.
Pfam; PF01826; TIL; 1.
Pfam; PF01826; Vwd.; 3.
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Q62635;
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MEDLINE-94299489;
                                                                                                                                                                                                                                            Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
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SMART; SM00216; VWD; 3.
NON_TER 1506 1506
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                           "Molecular cloning of the amino-terminal gene homologue. Evidence for expression:
                                                                                                        Ohmori H., Dohrman A.F., Gallup
Kim Y.S., Basbaum C.B.;
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                269:17833-17840(1994).
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"Susceptibility of the cysteine-rich N-terminal and C-terminal ends c
"susceptibility of the cysteine-rich N-terminal and C-terminal ends c
"susceptibility of the cysteine-rich N-terminal and C-terminal ends c
"susceptibility of the cleavage.";

Biochem. J. 331:323-330(1998).

-i- FUNCTION: COATS THE EPITHELIA OF THE INTESTINES, AIRWAYS, AND
OTHER MUCUS MEMBRANE-CONTAINING ORGANS. THOUGHT TO PROVIDE A
PROTECTIVE, LUBRICATING BARRIER AGAINST PARTICLES AND INFECTIOUS
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SEQUENCE OF 21-36.
TISSUE-INTESTINAL EPITHELIUM;
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Khatri I.A., Forstner G.G., Forst
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SUBUNIT: MULTIMERIC.
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        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2000 Compugen Ltd.
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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    US-08-276-967-2
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US-08-969-106-11
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US-08-875-972-2
US-08-417-174-121
US-08-417-174-121
US-08-417-174-121
US-09-267-439-121
US-09-267-439-121
US-09-267-439-121
US-08-526-710-9426-6
US-08-526-710-9426-3
US-08-526-710-3
US-08-742-243-35
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Sequence 2, Appli
Sequence 7, Appli
Sequence 11, Appl
Sequence 27, Appli
Sequence 27, Appl
Sequence 21, Appl
Sequence 35, Appl
Sequence 37, Appl
Sequence 38, Appl
Sequence 37, Appl
Sequence 38, Appl
Sequence 37, Appl
Sequence 38, Appl
Sequence 38, Appl
Sequence 37, Appl
Sequence 38, Appl
Sequence 38, Appl
Sequence 38, Appl
Sequence 39, Appl
Sequence 31, Appl
Sequence 31
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ca t		01200700010012007000
7	11-967-2  16-967-2  17-967-2  RAL INFORMATION: PELICANT: HATGY, D PELICANT: GAIDENTS, THE OF INVENTION: THEO FINVENTION: STATE: Texas COUNTRY: USA ZIP: 72210-4433 MEDIUM TYPE: F10-4433 MEDIUM TYPE: F10-4433 MEDIUM TYPE: F10-7210-4433 MEDIUM TYPE: F10-7210-4433 MEDIUM TYPE: SUBMEDIUM TYPE: SUBMEDIUM TYPE: SUBMEDIUM TYPE: SUBMEDIUM TYPE: SUBMEDIUM TYPE: SUBMEDIUM TYPE: NICHOLOGET IN FOR SEQ ID COUNTRY AGENTION ON THE TELEPANION FOR SEQ ID COUNTRY AGENTION TO SEQ ID COUNTRY AGENTION TO SEQ ID COUNTRY TO SEQ ID COUNTRY AGENTION ACID THEO THEO SEQ ID COUNTRY AGENTION TO SEQ ID COUNTRY AGENTION ACID THEO THEO SEQ ID COUNTRY AGENTION ACID TYPE: MANUEL TYPE: PIOL TOPOLOGY: Linear LEGOMODICATION: 11 TYPE: PIOL TOPOLOGY: 11 TOPOLOGY: 11 TOPOLOGY: 11 TOPOLOGY: 11 TOPOLOGY: 11	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Similarity 5; Conserva	7-2 Application , Application 185.817 NT: Hardy, D. NT: Garbers, F INVENTION: F SEQUENCES SUBER Arnold TP P. O. BOX HOUSTON HOUSTON TO BOX HOUSTON HOUS	733.88 773.88 773.88 773.88 773.88 773.88 773.88
ct	Application US Application US ASSIBLY SSSIBLY CORMATION: F: GATBERS, F: GATBERS, SEE: ARIOID, SP INVENTION: ST INVENTION: ST INVENTION: ST INVENTION: ST INTORNATION: ST INTORNATION: TIATOR INTORNATION I	
81.0% 71.4% ive	lication US/082769 817 ATION: Hardy, Daniel M. Garbers, David L. ENTION: Species-S; NO. BOX 4433 DABLE FORM: E: Floppy disk IBM PC compatible SYSTEM: PC-DOS/MS PatentIR PC-DOS/MS PATENTIN LE COMPATION: CATION DATA: US/08/2 E: SUBMitted Here INT INFORMATION: Chell, Barbara S. ON NUMBER: 33,928 DOCKET NUMBER: 33,928 DOCKET NUMBER: 33,928 DOCKET NUMBER: 33,928 TON INFORMATION: 713-787-1400 713-789-2679 0924 R SEQ ID NO: 2: RACTERISTICS: 476 amino acids SS: Single Linear E: protein	1145 1146 1146 1147 1164 1164 1165 1165 1165 1165 1190 1190 1190 1190 1190 1190 1190 119
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ore 34; DI ed. No. 5.0 Mismatche:	K IT	08-784-551C
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1505 CVPLSQC 1511

US-08-718-388-7; Sequence 7, Application US/08718388; Patent No. 6271362;

GENERAL INFORMATION:

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; MOLECULE TYPE: protein US-08-718-388-7
                                                                                                                                                                                                                                                                                                                                   US-08-718-388-9
                                                                                                                                                                                                                                                                                           Sequence 9, Application US/08718388 Patent No. 6271362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: BIRCH, STEWART, KOLASCH AND BIRCH
STREET: PO BOX 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: MURPHY JR, GERALD M
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 0230-111
                                                                                                                                                                         APPLICANT: HARADA, NAOKI
TITLE OF INVENTION: GENE ENC
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 29
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CORRESPONDENCE ADDRESS:
ADDRESSE: BIRCH, STEWART, KOLASCH AND BIRCH
STREET: PO BOX 747
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                                                                                                                                                                                                                                       APPLICANT: MORIKAWA, MINORU APPLICANT: HARADA, NAOKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: (703) 205-8000
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                             ZIP:
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                                         COUNTRY: USA
ZIP: 22040-0747
                                                                                                 STREET: PO BOX 747 CITY: FALLS CHURCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
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ZIP: 22040-0747
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71.4%;
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Pred. No. 5.
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Best Local Similarity
Thes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 536
ATTORNEY AGENT INFORMATION:
NAME: MURPHY JR, GERALD M
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 0230
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                             INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
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OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/718,388
                                                                                                                                                                                                          APPLICATION NUMBER: US/08
FILING DATE: 13-NOV-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
                                                                                                                                                                                                                                                                OPERATING SYSTEM: DOS
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
US/08/969,106
                                                                                                                                            REFERENCE/DOCKET NUMBER: 79
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Schulz, V
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Yang, M.
APPLICANT: Nandabalan, K.
MOLECULE TYPE:
                                                                                            TELEFAX: 212 CONTROL OF THE TELEFAX: 66141 PENNIE
                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 1155 Ave
CITY: New York
STATE: New York
                                                                                                               TELEPHONE: 212-75741
                  TOPOLOGY:
                             STRANDEDNESS:
                                                                                                                                                                                           REGISTRATION NUMBER: 18,872
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)GY: linear
                                            amino acids
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1155 Avenue of the Americas
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                  unknown
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71.4%;
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Pred. No. 1.2e+0
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US-08-969-106-11

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RESULT 5
US-08-875-972-2
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; Sequence 5985564
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                                               US-08-417-174-27

Sequence 27, Application US/08417174

Patent No. 5844075

GENERAL INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/002,448
FILING DATE: 16-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: Granahan Esq., Patricia
REGISTRATION NUMBER: 32,227
REGISTRATION NUMBER: 32,237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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                                                                                                                                                                                                                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Huntington Potter and Jinhue Li
TITLE OF INVENTION: ASSAY FOR IDENTIFYING GENES CAUSING
TITLE OF INVENTION: CHROMOSOME NON-DISJUNCTION
NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 376 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS A
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: (781) 861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      227 CVPATEC 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                    Local Similarity hes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/875,972 FILING DATE: 08-AUG-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Lexington
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                                                                                                                                                                                                                                                                                                                                                        linear
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 MELANOMA ANTIGENS AND
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Pred. No.
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Pred. No. 1.4e+02;
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                                                                                                                                                                                                                                                                    Length 376;
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Best Local Similarity
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                                                                                                                                                                                                                                                                            Sequence 121, Application US/08417174
Patent No. 5844075
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20.
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: PC-D
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                      TITLE OF INVENTION: TITLE OF INVENTION:
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                     MEDIUM TYPE: FLOPPY
                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                   296 IPLTSC 301
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FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/417,174 FILING DATE: 05-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                          COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                  CITY: NEW YORK
STATE: NEW YOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
TOPOLOGY: Un
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                                                                                                                                             STREET:
                                                                                                                                                           ADDRESSEE: MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                                                                                                                                                                                                               2 VPLTSC 7
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                                                                                      10154
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                                                                                                                                               345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : (212) 758-48
(212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
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                                           IBM PC COMPATIBLE
                                                          FLOPPY DISK
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83.3%;
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                             PC-DOS/MS-DOS
                                                                                                                                                                                                      METHODS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 32;
Pred. No.
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NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPAN: (212) 758-4800
TELEFAX: (212) 751-6849
INFORMATION FOR SEQ ID NO: 121:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 27, Application US/08231565A Patent No. 5874560 GENERAL INFORMATION:
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                                                                                          APPLICATION NUMBER: US/08/231
APPLICATION UMBER: US/08/231
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37, 341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
                                                                   TELEX: 421792 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
TITLE OF INVENTION: THEIR USE IN DIAGNOST:
TITLE OF INVENTION: METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
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STRANDEDNESS:
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tes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 22-APR-1994
CLASSIFICATION: 435
                   TYPE:
                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 22-AP
                                 LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                            10154
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                 amino acid
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Unknown
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83.3%;
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Pred. No.
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3.5e+02;
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US-09-007-961-27
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GENERAL INFORMATION:
                                                                         Query Match
Best Local (
                                                           Matches
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                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/231
PILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A
TITLE OF INVENTION: 1
TITLE OF INVENTION: 1
                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
TELEX: 421792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
296 IPLTSC 301
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                                                        Local Similarity hes 5; Conserv
                                                                                                                                                                STRANDEDNESS:
TOPOLOGY: Unl
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                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 345 PARK AVENUE CITY: NEW YORK
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nes 5; Conserv
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                            2 VPLTSC 7
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                                                                                                                                                                                           amino acid
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                                                          Conservative
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                                                                                                                                                                Unknown
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                                                                                                                                                  Protein
                                                                                                                                                                            Unknown
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83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METHODS
                                                                     76.2%; Score 32; DB 2; 83.3%; Pred. No. 3.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                          08/231,565
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                                                                                                                                                                                                                                          27:
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Pred. No. 3.5e+02;
Prediantches 0; Indels
                                                        Mismatches
                                                                                    Length 661;
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RESULT 10 US-09-267-439-27

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; MOLECULE TYPE:
US-09-267-439-27
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US-09-267-439-121
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                                                                                                                                                                                                   Sequence 121, Application US/09267439 Patent No. 6270778
                                                                                                                                                                                                                                                                                                                                                                           Matches
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                                                                                                                                                GENERAL INFORMATION:
APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (212) 751-6849
TELEX: 421792
INFORMATION FOR SEQ ID NO: :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
APPLICATION NUMBER: US/08/231,174
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
TITLE OF INVENTION: THEIR USE IN DIAGNOSTI
                                                               NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                               TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC TITLE OF INVENTION: THEIR USE IN DIAGNOSTIC AND THERAPEUTIC TITLE OF INVENTION: METHODS NUMBER OF SEQUENCES: 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                      296 IPLTSC 301
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: Unl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                         Local Similarity es 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE
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                                                   ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                       2 VPLTSC 7
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                                   345 PARK AVENUE
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                                                                                                                                                                  KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
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                                                   MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
                                                                                                                                                                                                                                                                                                                                                                                         76.2%;
83.3%;
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                                                                                                                                                                                                                                                                                                                                                                                         Score 32; I
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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J.5e+02;
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Best Local Similarity 83...
"Atches 5; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION UMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Kwon, Byoung Se
TITLE OF INVENTION: cDNA CLONES FOR HUMAN TYROSINASE AND FOR
TITLE OF INVENTION: A REGULATORY PROTEIN IN THE MELANIN PROTEIN PATHWAY
                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 VPLTSC
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296 IPLTSC
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                      STREET: 306 E
CITY: Ithaca
STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
STRANDEDNESS: Unk
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
APPLICATION NUMBER: 07/362,847 FILING DATE: 07-JUN-1989
                                                APPLICATION NUMBER: 06/915,753
FILING DATE: 06-OCT-1986
                                                                                                         CLASSIFICATION:
                                                                                                                    APPLICATION NUMBER: US/07/891,942G
FILING DATE: 01-JUN-1992
                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Christopher A. Michaels, Barnard, ADDRESSEE: Michaels STREET: 306 East State Street; Suite 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                    14850
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(212) 751-6849
                                                                                                                                                                                                                                                                                       USA
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83.3%;
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Pred. No.
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ATTORNEY/AGENT INFORMATION: NAME: Michaels, Christop

REGISTRATION NUMBER:

INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:

LENGTH:

TELEPHONE:

607-273-2609

MOLECULE TYPE: pro-

protein single

STRANDEDNESS:

amino acid

668 amino acids

PUBLICATION INFORMATION:

Chintamaneni, C

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SOFTWARE: Patentin Release #1.0, Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                               APPLICANT: Ruoslahti, Erkki
APPLICANT: Pasqualini, Renata
TITLE OF INVENTION: Method of Identifying Molecules That
TITLE OF INVENTION: Home to a Selected Organ In Vivo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: IN TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 83.3%; tes 5; Conservation
                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAGES: 9228-9232
DATE: October-1991
RELEVANT RESIDUES IN SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Michaels, Christopher A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus on mouse chromosome 10 and is in a syntenic region chromosome 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08526710
                                                                                                                                                                                                                                                               E: Campbell and Flores
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kozak, Christine A
Copeland, Neal G
Gilbert, Debra J
Jenkins, Nancy
Barton, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A.
                                                        US/08/526,710
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Pred. No.
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                                                      MOLECULE TYPE: US-08-862-855-21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                  CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/526,710

FILING DATE: 11-SEP-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/813,273

FILING DATE: 10-MAR-1997

ATTORNEY/AGENT INFORMATION:

NAME: Campbell, Cathryn A.

REGISTRATION NUMBER: 9-LJ 2621

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
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Best Local
Query Match
                                                                                                                                           TELEFAX: (619) 535-8949
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (619) 535-900
TELEFAX: (619) 535-8949
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/862,855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-LJ
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Ruoslahti, Erkki
APPLICANT: Pasqualini, Renata
TITLE OF INVENTION: Method of Identifying Molecules That
TITLE OF INVENTION: Home to a Selected Organ In Vivo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 4. CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 4370 La
CITY: San Diego
STATE: Californi
                                                                                          TOPOLOGY:
                                                                                                                                                                                                     TELEPHONE:
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nes 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Campbell, Cathryn A. REGISTRATION NUMBER: 31,815
                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
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                                                                                                            amino acid
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GY: linear
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                                                                                                                           7 amino acids
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                                                                                          linear
                                                                                                                                                                                                       (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Campbell & Flores LLP
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73.8%;
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Pred. No. 1.7e+05;
2; Mismatches 1
Score 31;
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DB
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296 IPLTSC 301

2 VPLTSC 7

Matches

US-07-891-942G-6

JOURNAL:

AUTHORS:

Francke, Uta

Kim, Kack K

US-08-526-710-21

Sequence 21, Appr-Patent No. 5622699
GENERAL INFORMATION:

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk

CORRESPONDENCE ADDRESS: NUMBER OF SEQUENCES:

STREET:

San Diego California

United States

ADDRESSEE:

ATTORNEY/AGENT INFORMATION:

CLASSIFICATION:

11-SEP-1995

APPLICATION NUMBER:

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PRIOR APPLICATION DATA:

APPLICATION UMBER: US 08/526,710
FILING DATE: 11-SEP-1995
PRIOR APPLICATION NUMBER: US 08/813,273
FILING DATE: 10-MAR-1997
PRIOR APPLICATION NUMBER: US 08/813,273
FILING DATE: 10-MAR-1997
PRIOR APPLICATION NUMBER: US 08/862,855
FILING DATE: 23-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathiyn A:
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-LJ 3423
FILECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-8949
INFORMATION FOR SEO ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 7 amino acids
TYPE: amino acids
Search completed: June 17, 2002, 15:56:39 Job time: 88 sec
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                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                  ; MOLECULE TYPE: peptide US-09-226-985-21
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US-09-226-985-21
                                                                                                                                                                             Query Match 73.8%;
Best Local Similarity 57.1%;
Matches 4; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 57.1%; Matches 4; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 92122
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/226,985
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ruoslahti, Erkki
APPLICANT: Pasqualini, Renata
TITLE OF INVENTION: Molecules That Home to a Selected Organ In Vivo
NUMBER OF SEQUENCES: 44
CORRESPONDENCE ADDRESS:
ADDRESSEE: Campbell & Flores LLP
STREET: 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: Un
ZIP: 92122
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CITY: San Diego
STATE: California
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1 CLPVASC 7
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Pred. No. 1.7e+05;
'''amatches 1; Indels
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2; Mismatches 1; Indels
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Title:
Perfect score:
Sequence:
                                                                                                              Run on:
                                                                                                                                             OM protein - protein search, using sw model
                                                                June 17, 2002, 15:58:25; Search time 95.43 Seconds (without alignments) 6.041 Million cell updates/sec
US-09-761-636A-12
38
1 CVPLTC 6
                                                                                                                                                                                                  GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
```

Searched: 283138 seqs, 96089334 residues Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 283138

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

PIR\_71:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	80	7	6	5	4	ω	N	_	200	Result
31	31	31	31	31	31	32	32	32	32	32	32	32	32	32	32	32	32	32	33	33	ω ω	33	33	33	34	35	37	38	Proce	
81.6	Ė	81.6	Ë	•	۲.		٠.		84.2	٠			84.2		84.2	84.2			86.8	6	6	6	86.8	86.8	89.5	92.1	97.4	100.0	Maten	Query
434	414	326	224	133	40	4660	1034	972	518	425	398	345	314	301	252	156	137	108	1236	650	637	467	415	332	367	1627	293	817	Length	
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I50132	T50019	C69341	T27063	T29606	E45495	T42737	JC5598	A30363	AD1930	T40610	A35281	NBBO	B43652	T40593	B82659	C81364	T26433	S12982	A53970	A34498	T08050	AC2390	A54126	I48933	T20914	S65464	T27621	T25674	15	}
	hypothetical prote	70		hypothetical prote	efensin-	gp330 protein prec		glycoprotein GP330	ammonium transport	probable clathrin		apolipoprotein H p	ferredoxin [2Fe-2S	cytoplasmic dynein	two-component syst	٠.		hypothetical 12.2K	1-phosphatidylinos	glycoprotein antiq	probable ethylene	transposase all467	_	Λ.	hypothetical prote	CO.	_	othetic	Description	

## ALIGNMENTS

RESULT 2 T27621 hypothetical protein ZC504.5 - Caenorhabditis elegans C; Species: Caenorhabditis elegans C; Species: Caenorhabditis elegans C; Pate: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 18-Feb-2000 C; Accession: T27621 R; Kershaw, J. submitted to the EMBL Data Library, July 1995 A; Reference number: Z20394 A; Accession: T27621 A; Status: preliminary; translated from GB/EMBL/DDBJ A; Molecule type: DNA A; Residues: 1-293 <wil) a;="" cenetics:="" cesp:zc504.5="" cross-references:="" embl:z50029;="" genetics:="" genetics<="" gspdb:gn00028;="" pidn:caa90343.1;="" td=""><td>100.0%; Score'38; ilarity 100.0%; Pred. No. Conservative 0; Mismatc 6</td><td>A; Reference number: Z20068 A; Accession: T25674 A; Status: preliminary; translated from GB/EMBL/DDBJ A; Molecule type: DNA A; Residues: 1-817 <let> A; Residues: 1-817 <let> A; Cross-references: EMBL:U80840; PIDN:AAB37929.1; GSPDB:GN00020; CESP:F08D12.6 A; Experimental source: strain Bristol N2; clone F08D12 C; Genetics: A; Gene: CESP:F08D12.6 A; Map position: 2 A; Introns: 27/2; 329/3; 407/1; 477/3; 538/3; 622/2</let></let></td><td>wa, co</td></wil)>	100.0%; Score'38; ilarity 100.0%; Pred. No. Conservative 0; Mismatc 6	A; Reference number: Z20068 A; Accession: T25674 A; Status: preliminary; translated from GB/EMBL/DDBJ A; Molecule type: DNA A; Residues: 1-817 <let> A; Residues: 1-817 <let> A; Cross-references: EMBL:U80840; PIDN:AAB37929.1; GSPDB:GN00020; CESP:F08D12.6 A; Experimental source: strain Bristol N2; clone F08D12 C; Genetics: A; Gene: CESP:F08D12.6 A; Map position: 2 A; Introns: 27/2; 329/3; 407/1; 477/3; 538/3; 622/2</let></let>	wa, co

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A; Molecule type: mRNA
A; Residues: I-1627 <HAA>
A; Residues: I-1627 <HAA>
A; Cross references: EMBL.U28727; NID:g1142969; PIDN:AAC50543.1; PID:g1142970
A; Cross references: EMBL.U28727; NID:g1142969; PIDN:AAC50543.1; PID:g1142970
B; Haaning, J.; Oxvig, C.; Overgaard, M.T.; Ebbesen, P.; Kristensen, T.; Sottl
Biochem. 237, 159-163, 1199-164.
720914 . T20914 . T20914 . T20914 . T20914 . T20914 . Caenorhabditis elegans C; Species: Caenorhabditis elegans C; Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #t
                                                                                                              RESULT
T20914
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F;1-22/Domain: signal sequence *status predicted <SIG>
F;23-80/Domain: propeptide *status predicted <PRO>
F;81-1627/Product: pregnancy-associated plasma protein A *status predicted <MAT>
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C;Date: 22-Nov-1996 #sequence_revision 22-Nov-1996 #text_change 05-Nov-1999
C;Accession: S65464; 854420; I38097
C;Accession: S65464; C; Overgaard, M.T.; Ebbesen, P.; Kristensen, T.; Sottrup-Jensen submitted to the EMBL Data Library, June 1995
A;Description: Complete CDNA sequence of the preproform of human pregnancy-associated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:X68280; NID:g394649; PIDN:CAA48341.1; PID:g394650 R;Oxvig, C.; Sand, O.; Kristensen, T.; Gleich, G.J.; Sottrup-Jensen, L. J. Blol. Chem. 268, 12243-12246, 1993 A;Title: Circulating human pregnancy-associated plasma protein-A is disulfide-bridged A;Reference number: I38097; MUID:93286045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Amino acid sequence of human pregnancy-associated plasma protein-A derived from A;Reference number: A54220; MUID:94146014 A;Accession: A54220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Complete cDNA sequence of the preproform of human pregnancy-associated plasma A;Reference number: S65463; MUID:96203921
A;Accession: S65463
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A; Residues: 77-1627 <
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A; Residues: 77-1627 <KRI>
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A; Residues: 1-102 <HA
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N;Alternate names: PAPP-A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Gene: GDB: PAPPA
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                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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                       #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
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83.3%;
                                                                                                                                                                                                                                                                                                                                                                    92.1%;
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Pred. No.
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Pred. No.
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O.; Moller, N.P.H.; Sottrup-Jensen,
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                    Query Match
Best Local Similarity
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R;Marquardt, D.L.; Walker, L.L.; Heinemann, S.
J. Immunol. 152, 4508-4515, 1994
A;Title: Cloning of Two Adenosine Receptor Subtypes From Mouse
A;Reference number: 148931; MUID:94209670
A;Accession: 148933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                adenosine receptor subtype - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 29-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      submitted to the EMBL Data Library, March 1997 A; Reference number: Z19346 A; Accession: T20914
  A;Cross-references: GB:U06633; NID:g507893; PIDN:AAA19570.1; PID:g507894 A;Note: authors translated the codon ATG for residue 84 as His C;Superfamily: endothelin receptor B
                                                                A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-415 <KUM>
                                                                                                                                                                          C;Accession: A54126
R;Kumar, C.; Mwangl, V.; Nuthulaganti, P.; Wu, H.L.; Pullen, M.; Brun, K.; Aiyar, J. Biol. Chem. 269, 13414-13420, 1994
A;Title: Cloning and characterization of a novel endothelin receptor from Xenopus
                                                                                                                                                                                                                                                             endothelin receptor-AX - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 07-Jul-1995 #sequence_revision 07-Jul-1995 #text_change 16-Jul-1999
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C; Superfamily: endothelin
                                                                                                                                A; Reference number: A54126; A; Accession: A54126
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A; Residues: 1-332 < RES>
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A;Map position: 5
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A; Residues: 1-367 <WIL>
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83.3%;
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71;
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Score Pred.

NO ;

дд 86;

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C;Species: Cucumis melo (muskmelon)
C;Species: Cucumis melo (muskmelon)
C;Date: 21-May-1999 #sequence_revision 21-May-1999 #text_change 08-Oct-1999
C;Accession: T08050
C;Accession: T08050
R;Sato-Nara, K.; Yuhashi, K.; Higashi, K.; Hosoya, K.; Kubota, M.; Ezura, H. submitted to the EMBL Data Library, December 1997
A;Description: Expression of an ERS homolog gene of melon (Cucumis melo L. re A;Reference number: Z16317
A;Accession: T08050
A;Accession: T08050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, DNA Res. 8, 205-213, 2001

A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium An
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Note: Anabaena sp. (strain PCC 7120) is a synonym of Nostoc sp. strain PCC 7120 C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 11-Jan-2002 C;Accession: AC2390
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A;Residues: 1-467 <KUR>
A;Cross-references: GB:BA000019; PIDN:BAB76374.1; PID:g17133812; GSPDB:GN00179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: AB1807; MUID:21595285; PMID:11759840 A; Accession: AC2390
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Best Local Similarity
Thes 5; Conservi
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                                                                   glycoprotein antigen Bm86 precursor - southern cattle tick
C:Species: Boophilus microplus (southern cattle tick)
C:Date: 22-Jun-1990 #sequence_revision 22-Jun-1990 #text_change 11-Jan-2000
C:Accession: A34498
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A; Residues: 1-637 <SAT>
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                             R;Rand, K.N.; Moore, T.; Sriskantha, A.; Spi
Proc. Natl. Acad. Sci. U.S.A. 86, 9657-9661
           A; Title: Cloning and
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                                 Spring, K.; Tellam, R.; Willadsen, P.; Cobon, 661, 1989
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             antigen from the
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             cattle tick Boophilus
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C.Accession: A53970
C.Accession: A53970
C.Accession: A53970
R;Emori, Y.; Sugaya, R.; Akimaru, H.; Higashijima, S.; Shishido, E.; Saigo, K.; Ho R;Emori, Y.; Sugaya, R.; Akimaru, H.; Higashijima, S.; Shishido, E.; Saigo, K.; Ho R;Emori, Y.; Sugaya, R.; Aliol. Chem. 269, 19474-19479, 1994
A;Title: Drosophila phospholipase C-gamma expressed predominantly in blastoderm ce A;Reference number: A53970; MUID:94308233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Superfamily: unassigned EGF-related proteins; EGF homology
C;Keywords: glycoprotein
F;209-246/Domain: EGF homology <EGF>
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C.;Superfamily: 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase II; 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase II; 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase domain C:Keywords: phosphoric diester hydrolase F;326-468/Domain: 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase domain F:589-688/Domain: SH2 homology <SH2B>F;701-789/Domain: SH2 homology <SH2B>F;971-789/Domain: SH2 homology <SH2B>F;979-1095/Domain: SH3 homology <SH2B>F;979-1095/Domain: SH3 homology <SH3>F;979-1095/Domain: 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase domain
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A; Residues: 1-650 < RAN>
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C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 17-Mar-2000
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A; Residues: 1-1236 <EMO>
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A;Cross-references: GB:X53744; NID:g931; PIDN:CAA37774.1; PID:g933 C;Superfamily: dog hypothetical 12.2K protein (68K signal recognition particle re
                                                                                                                     A;Title: The 68 kDa protein of signal recognition particle contains a glycine-ric A;Reference number: S12981; MUID:91092392
A;Accession: S12982
                                                                                                                                                                                                              R; Herz, J.; Flint, N.; Stanley, K.; Frank, FEBS Lett. 276, 103-107, 1990
                                                                                                                                                                                                                                                                                                    hypothetical 12.2K protein (68K signal recognition particle region) - dog C;Species: Canis lupus familiaris (dog)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 05-Nov-1999
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                                                            A; Molecule type: mRNA
A; Residues: 1-108 <HER>
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Pred. No. 1.2e+02;
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two-component system, regulatory protein XF1626 [imported] - Xylella fastidiosa (strain
                                                                                                           В
                                                     RESULT
                                                                                                                                                                                                                                                                               A; Gene: Cj0908
                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:AL139076; GB:AL111168; NID:96968128; PIDN:CAB73165.1; PID:9696834
A;Experimental source: serotype O2, strain NCTC 11168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             probable periplasmic protein Cj0908 [imported] - Campylobacter jejuni (strain NCTC 11168
C;Species: Campylobacter jejuni
C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 31-Mar-2000
                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-156 < PAR>
                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                              A; Reference number: A81250; MUID:20150912 A; Accession: C81364
                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Title: The genome sequence of the food-borne pathogen Campylobacter jejuni reveals hyp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Accession: C81364
R;Parkhill, J.; Wren, B.W.; Mungall, K.; Ketley, J.M.; Churcher, C.; Basham, D.;
C.W.; Quail, M.; Rajandream, M.A.; Rutherford, K.M.; VanVliet, A.; Whitehead, S.
Nature 403, 665-668, 2000
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A;Molecule type: DNA
A;Residues: 1-137 <WIL>
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A; Accession: T26433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C;Accession: T26433
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; McMurray, A.
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C:Species: Caenorhabditis elegans
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A; Gene: SPDB: SPBC646.17c
A; Map position: 2
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                                                                                                                                                                                                                                                                                                                                                                                       A; Cross-references: EMBL:AL035216; PIDN:CAA22821.1; GSPDB:GN00067; SPDB:SPBC646.170
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A; Residues: 1-301 <SEE>
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A; Accession: T40593
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Experimental Source: Strain 93Cc
R;Simpson, A,J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, Briones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Car as-Neto, E.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S. submitted to GenBank, June 2000
A;Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Chado, M.A.; Madeira, A.M.B.N.; Madeira, H.M.F.; Marrino, C.L.; Marques, M.V.; Marthors: Martins, E.M.F.; Matsukuma, A.Y.; Menck, C.F.M.; Miracca, E.C.; Miyaki, F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, C.C.; Palmier Rodrigues, V.; Rosa, A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sa, Authors: da Silva, A.C.R.; da Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silva, A.M.; Verjovski-Almeida, S.; Vettore, A.R.; Ferreice number: A59328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: preliminary; translated from GB/EMBL/DDBJ
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C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 15-Sep-2000
C;Accession: B82659
R;anonymous, The Xylella fastidiosa Consortium of the Organization for Nucleotide Nature 406, 151-157, 2000
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A;Note: for a complete list of authors see reference number A59328 below
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A; Residues: 1-252 <SIM>
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16-OCT-2001 (Rel. 40, Last ann 16-OCT-2001 (Rel. 40, Last ann [Pyruvate dehydrogenase [Lipoa precursor (EC 3.1.3.43) (PDP 2 catalytic subunit 2) (PDPC 2).	40, Cr	STANDARD;			38	1597	1286	810	781	596	454	454	445	444	427	427	
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16-OCT-2001 (Rel. 40, Last sequence product) 16-OCT-2001 (Rel. 40, Last annotation update) [Pyruvate dehydrogenase [Lipoamide]]-phosphatase 2, mitochondrial precursor (EC 3.1.3.43) (PDP 2) (Pyruvate dehydrogenase phosphatase, catalytic subunit 2) (PDPC 2).	ndate)	530 AA.		ENTS											Ö		
ochond phosi						P49025	014578	P16382	Q27778	P38090	P04694	P17735	042354	P32940	029010	P25101	
hrial hatase,					bos taurus	mus musculu	homo sapien	mus musculu	schistosoma	saccharomyc	rattus norv	homo sapien	brachydanio	xenopus lae	sus scrofa	homo sapien	

SOFT TO DESCRIPTION OF THE TWO RESERVED TO THE PROPERTY OF THE PYRUVATE DEHYDROGENASE COMPLEX.

-!- CARALYTIC ACTIVITY: [Pyruvate dehydrogenase (lipoamide)] + phosphate + H(2)0 = [pyruvate dehydrogenase (lipoamide)] + phosphate.
-!- COFACTOR: MAGNESIUM.
-!- SUBUNIT: HETERODIMER OF A CATALYTIC SUBUNIT AND A FAD PROTEIN OF UNKNOWN FUNCTION (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: Mitochondrial matrix.
-!- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN LIVER.
-!- SIMILARITY: BELONGS TO THE PP2C FAMILY. SMART; This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial Huang B., Gudi R., Wu P., Harris R.A., Hamilton J., Popov K.M.;
"Isoenzymes of pyruvate dehydrogenase phosphatase. DNA-derived amino acid sequences, expression, and regulation.";
J. Biol. Chem. 273:17680-17688(1998).
-i- FUNCTION: CATALYZES THE DEPHOSPHORYLATION AND CONCOMITANT REACTIVATION OF THE ALPHA SUBUNIT OF THE El COMPONENT OF THE PARTY PA PROSITE; PSU1034; FF40, 1.

Hydrolase; Mitochondrion; Transit peptide; Magnesium.

TRANSIT 1 67 MITOCHONDRION (POTENTIAL).

TRANSIT 1 68 530 [PYRUVATE DEHYDROGENASE [LIPOAMIDE]]-InterPro; IPR000222; PP2C.
InterPro; IPR001932; PP2C\_domain.
Pfam; PF00481; PP2C; 2. SEQUENCE or send an email to license@isb-sib.ch). MEDLINE=98316337; PubMed=9651365; TISSUE=Liver; NCBI\_TaxID=10116; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus. Rattus norvegicus (Rat). EMBL; AF062741; AAC40168.1; -. entities requires a SEQUENCE FROM N.A. SM00331; PP2C\_SIG; 1. SM00332; PP2Cc; 1. 530 AA; PP2Cc; 1. PP2C; 1. tatement is not removed. Usage by and for commercial license agreement (See http://www.isb-sib.ch/announce/ 59654 MW; PHOSPHATASE 5AB688FAC78AD9CD CRC64;

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RESULT 2
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Matches 5
                                                                                                                                                                             Lawrence J.B., Oxvig C., Overgaard M.T., Sottrup-Jens Gleich G.J., Hays L.G., Yates J.R. III, Conover C.A.; "The insulin-like growth factor (IGF)-dependent IGF b protease secreted by human fibroblasts is pregnancy-a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 77-1627 FROM N.A., SEQUENCE OF 81-98; 117-126; 210-224; 466-485; 507-519; 576-593; 609-621; 718-736; 742-754; 1006-1017; 1259-1273; 1369-1398; 1490-1509; 1524-1533 AND 1537-1544 VARIANT SER-944, AND TISSUE SPECIFICITY.
TISSUE-Placenta, and Serum; MEDLINE-94146014; PubMed-7508748; MEDLINE-94146014; PubMed-7508748; MEDLINE-9416014; PubMed-7508748;
                                                                                                                                                                                                                                                                                                                                                                                vxvig C., Sand O., Kristensen T., Gleich G.J., "Circulating human pregnancy-associated plasma bridged to the proform of eosinophil major basi J. Biol. Chem. 268:12243-12246(1993).
                          Christiansen
                                             MEDLINE=20469470; PubMe
Overgaard M.T., Haaning
                                                                                                                                                                 protein-A.";
                                                                                                                                                                                                                                                                              MEDLINE-99179030; PubMed-10077652;
                                                                                                                                                                                                                                                                                                    TISSUE-Fibroblast;
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Oxvig C., Sand O., Kristensen T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    derived from cloned cDNA.";
Biochemistry 33:1592-1598(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kristensen T., Oxvig C., Sand O., Moller N.P.H., So
"Amino acid sequence of human pregnancy-associated
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Mammalia; |
                                                                                                                                                                                                                                                                                                                                              IDENTIFICATION, FUNCTION, SUBCELLULAR LOCATION, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-96203921; PubMed-8620868;
Haaning J., Oxvig C., Overgaard M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              associated plasma protein-A. induction by camp.";
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                                                                  PubMed=10913121;
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83.3%;
                     J., Boldt H.B., Olsen G.J., Sottrup-Jensen 1
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8.9;
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DEVELOPMENTAL STAGE.

DEVELOPMENTAL STAGE.

MEDLINE-95293954; PubMed-7539791;

Oxvig C., Haaning J., Kristensen L., Wagner J.M., Rubin I.,

Stigbrand T., Gleich G.J., Sottrup-Jensen L.;

"Identification of angiotensinogen and complement C3dg as novel proteins binding the proform of eosinophil major basic protein human pregnancy serum and plasma.";

T Riol. Chem. 27:13645-13651 (1995).

T Riol. Chem. 27:1367-70teinase which specifically cleaves IGFF.
                                                                                                                                                                       EMBL; X68280; MIM; 176385; .
                                                                                                                                                                                                                                            use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                       Pfam; PF00084; sushi; 4
SMART; SM00032; CCP; 4.
                                                                                              InterPro; IPR000800; Notch.
InterPro; IPR000436; Sushi_SCR_CCI
InterPro; IPR000130; Zn_MTpeptdse.
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Overgaard M.T., Oxvig C., Christiansen M., Lawrence J.B.,
Conover C.A., Gleich G.J., Sottrup-Jensen L., Haaning J.;
"Messenger ribonucleic acid levels of pregnancy-associated plasma protein-A and the proform of eosinophil major basic protein:
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J. Biol.
                        PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bonno M., Oxvig C., Kephart G.M., Wagner J.M., Kristensen 'Sottrup-Jensen L., Gleich G.J.; "Localization of pregnancy-associated plasma protein-A and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 expression in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Expression of recombinant human pregnancy-associated plasma protein-A and identification of the proform of eosinophil major basic protein as its physiological inhibitor.";
J. Biol. Chem. 275:31128-31133(2000).
                                                                                                                                                                                                                                                                                                                                                                                      DEVELOPMENTAL STAGE: Present in serum and placenta pregnancy; levels increase throughout pregnancy. INDUCTION: By 8-bromoadenosine-3', 5', phosphate. PTM: There appear to be no free cysteinyl groups. SIMILARITY: CONTAINS 4 SUSHI (SCR) DOMAINS. SIMILARITY: BELONGS TO PEPTIDASE FAMILY M46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  predominantly found as a disulfide-linked 2:2 heterotetramer with the proform of PRG2.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: High levels in placenta and pregnancy serum. In placenta, expressed in X cells in septa and anchoring villi, and in syncytiotrophoblasts in the chorionic villi. Lower levels are found in a variety of other tissues including kidney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   myometrium, endometrium, ovaries, breast, colon, fibroblasts and osteoblasts
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                                        SM00004; NL;
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                        PS00142;
 Metalloprotease;
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                     ZINC_PROTEASE;
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ZASE; 1.
Metal-binding; Zinc;
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   Signal; Glycoprotein;
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SIGNAL
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ACT_SITE
METAL
                                 derived mast cells.";

J. Immunol. 152:4508-4515(1994).

-I- FUNCTION: RECEPTOR FOR ADENOSINE. THE ACTIVITY OF THIS RECEPTOR IS MEDIATED BY G PROTEINS WHICH ACTIVATE ADENYLYL CYCLASE.

-I- SUBCELLULAR LOCATION: Integral membrane protein.
-I- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
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DOMAIN
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CHAIN
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STRAIN-BALB/C; TISSUE-Bone marrow;
MEDLINE-94209670; PubMed-8157966;
Marquardt D.L., Walker L.L., Heine
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01-NOV-1997 (Rel.
15-JUL-1998 (Rel.
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               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                               Mus musculus (Mouse).
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les 5; Conserv
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         European Bioinformatics Institute.
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fW; 34164AA3EE56C768
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pfiam; pe00001; 7tm_1; 1.
pRINTS; PR00237; GPCRRHODOPSN.
pROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
pROSITE; PS00237; G_PROTEIN_RECEP_F1_2; 1.
G-protein_coupled_receptor; Transmembrane;
                                                                                                                                                                                                                                                                                                                                              BM86_BOOMI STANDARD; PRT; 650 AA.
P20736;
01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Glycoprotein antigen BM86 precursor (Protective antigen).
Boophilus microplus (Cattle tick).
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                                                                                                                "Cloning and expression of a protective antigen from Boophilus microplus.";
Proc. Natl. Acad. Sci. U.S.A. 86:9657-9661(1989).
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                      PARTIAL SEQUENCE:
MEDLINE-89309823; PubMed-2745982;
Willadsen P., Riding G.A., McKenn
Nielsen J.N., Lahnstein J., Cobon
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Willadsen P.,
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, Riding G.A., McKenna R.V., Kemp D.H., Lahnstein J., Cobon G.S., Gough J.M.; control of a parasitic arthropod. Iden
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SMART; SM00101; EGF; 2.
PROSITE; PS01012; EGF_1; FALSE_NEG.
PROSITE; PS01186; EGF_2; FALSE_NEG.
Glycoprotein; Antigen; Signal; EGF-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protective antigen from Boophilus microplus.";
J. Immunol. 143:1346-1351(1989).
-i- SUBCELLULAR LOCATION: Attached to the membrane
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                                                                                      Length 650;
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        RESULT 5
LMG3_HUMAN
PRINTS; PRO0011; EGFLAMININ.

PRODOM; PRO02082; LamMY; 1.

PRODOM; PD002082; LamMY; 1.

PRODOM; PO003031; Laminin_B; 1.

SMART; SM00180; EGF_Lam; 10.

SMART; SM00001; EGF_like; 1.

SMART; SM00281; LamB; 1.

SMART; SM00281; LamB; 1.

SMART; SM00186; LamW; 1.

PROSITE; PS00022; EGF_1; 7.

PROSITE; PS01186; EGF_2; 2.

PROSITE; PS01186; EGF_2; 10.

Glycoprotein; Basement membrane; Extracel:

Laminin EGF-like domain; Cell adhesion; Re
                                                                                                                                                                                Pfam;
                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                     Pfam;
                                                                                                                                                                                                Pfam;
                                                                                                                                                                                                           InterPro; IPR002049; Lamini
InterPro; IPR001886; LamNT.
                                                                                                                                                                                                                                     InterPro; IPR000561;
InterPro; IPR000034;
                                                                                                                                                                                                                                                 InterPro;
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MIM; 604349;
                                                                                                                                                                                                                                                                            EMBL; AF041835; AAD36991.1; HSSP; P02468; 1TLE.
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PF00053; laminin_EGF; 10.
PF00055; laminin_Nterm; 1
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Laminin_B.
Laminin_EGF.
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Extracellular matrix;
nesion; Repeat; Signal.

Coiled

coil;

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WA Burgeson R.E., Champliaud M.F.;

Thorefore the laminin gamma3 chain: a novel, represented the laminin gamma3 chain: a novel, represented the laminin chain.";

RT non-basement membrane-associated, laminin chain.";

RT J. Cell Biol. 145:605-618(1999).

C. I. STHOUGHT TO MEDIATE THE ATTACHMENT, MIGRATION, & ORGANIZATION OF CELLS INTO TISSUES DURING EMBRYONIC DEVELOPMENT BY INTERACTING OF CELLS INTO TISSUES DURING EMBRYONIC DEVELOPMENT BY INTERACTING OF CELLS INTO TISSUES DURING EMBRYONIC DEVELOPMENT BY INTERACTING OF CELLS INTO TISSUES DURING EMBRYONIC DEVELOPMENT BY INTERACTING OF THREE COMPLEX GLYCOPROTEIN, CONSISTING OF THREE SHORT ARMS WITH GLOBULES AT EACH END.

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COMPRISION ONE LONG & THREE SHORT ARMS WITH GLOBULES AT EACH END.
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LAMC3.
Homo sapiens (Human).
Homo sapiens (Human).
Horota; Metazoa; Chordata; Metazoa; Primates;
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01-MAR-2002 (Rel. 41, Last sequence up
01-MAR-2002 (Rel. 41, Last annotation
Laminin gamma-3 chain precursor (Lamin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=99242614; PubMed=10225960; Koch M., Olson P.F., Albus A., Jin W., Hunter D.D., Burgeson R.E., Champliaud M.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
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01-0CT-1989 (Rel. 12, Created)
01-0CT-1989 (Rel. 12, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Vanillate O-demethylase oxidoreductase (EC 1.14.13.-) (Vanillate
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CHAIN
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                                                                                                                                                                                         "Cloning and sequencing of Pseudomonas demethylase.";

J. Bacteriol. 170:4924-4930(1988).
-!- COFACTOR: FMN (BY SIMILARITY).
-!- PATHWAY: VANILLATE DEGRADATION (VAN IN THE DEGRADATION OF LIGNIN).
-!- SIMILARITY: IN THE C-TERMINAL, BELC
                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE-89008117; Pubmed=3170489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pseudomonas sp. (strain A Bacteria; Proteobacteria.
                                                                                                                                                                                                                                                                                                                                                                                               Brunel F., Davison J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VANB
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DOMAIN II AND I.

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N-LINKED (GLCNAC. ) (POTENTIAL)
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InterPro; IPR001834; Cyt_B5_reductase.
InterPro; IPR001041; Ferredoxin.
InterPro; IPR001433; Oxidored_FAD.
InterPro; IPR000951; Phdiox_reductase.
Pfam; PF00970; FAD_binding_6; 1.
Pfam; PF00111; fer2; 1.
Pfam; PF00175; NAD_binding; 1.
  Kato
                                                                                                "Complete primary structure of bovine localization of the disulfide bridges Biochemistry 31:3611-3617(1992).
                                                                                                                                                                                                                                                                               Gao B., Virmani M., Romm E., Lazar-Wesley Appella E., Kunos G., Takacs L.; Submitted (DEC-1992) to the EMBL/GenBank/I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NP_BIND
                                      SEQUENCE OF 20-345, CARBOHYDRATE-LINKAGE TISSUE=Plasma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APOH_BOVIN STANDARD; PRT; 345 AA. P17690; Q28052; O1-AUG-1990 (Rel. 15, Created) O1-NOV-1997 (Rel. 35, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Beta-2-glycoprotein I precursor (Apolipoprotein Egita(2)GPI).
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PROSITE; PS00197; 2FE2S_FERREDOXIN; 1
Aromatic hydrocarbons catabolism; Lig
Flavoprotein; FMN; NAD; Iron-sulfur;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See or send an email to license@isb-sib.ch).
                       MEDLINE=92089075;
                                                                                                                                                                                   Bendixen E.,
                                                                                                                                                                                                  MEDLINE=92232647; PubMed=1567819;
                                                                                                                                                                                                                                            SEQUENCE OF 4-345 FROM
                                                                                                                                                                                                                                                                                                                                                   TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                                                                                                                             Kristensen T.;
                                                                                                                                                                                                                           TISSUE=Liver
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bos taurus (Bovine).
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NP_BIND
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Enjyoji K.-I.;
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                                                                                                                                                                                   Halkier
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                     PubMed=1751487
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217
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                                                                                                                                                                                 T., Magnusson
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CONTROL (2FE
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Pred. No.
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; Lignin degradation; 0
;fur; Electron transport
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                                                                                                                                        2-glycoprotein
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SMART; SM00032; CCP; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-90226328; PubMed-2327984;
Li Q., Blacher R., Esch F., Congote L.F.;
"Isolation from fetal bovine serum of an apolipoprotein-H-like
protein which inhibits thymidine incorporation in fetal calf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Amino acid sequence and location of the disulfide bonds in bovine beta 2 glycoprotein I: the presence of five Sushi domains."; piochemistry 30:11687-11694(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Heparin-binding;
SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; L07303; AAA30382.1; -. EMBL; X60065; CAA42669.1; -.
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PIR; S09032;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 20-41.
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CHEM. J. 267:261-264(1990).

FUNCTION: BINDS TO VARIOUS KINDS OF NEGATIVELY CHARGED SUBSTANCES SUCH AS HEPARIN, PHOSPHOLIPIDS, AND DEXYRAN SULFATE. MAY PREVENT SUCH AS HEPARIN, PHOSPHOLIPIDS, AND COAGULATION CASCADE BY BINDING TO PHOSPHOLIPIDS ON THE SURFACE OF DAMAGED CELLS.
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  Similarity 4; Conser
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2; S09032.
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    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Glycoprotein; Plasma; Repeat; Sushi; Signal.
                                                                                                                       38252
                        84.2%;
                                                                                                                       WW.;
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01-OCT-1996 (Rel. 3
01-OCT-1996 (Rel. 3
16-OCT-2001 (Rel. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-1996 (Rel. 34, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
S-adenosylmethionine decarboxylase proenzyme (EC 4.1.1.50) (AdoMetDC)
(SamDC) [Contains: S-adenosylmethionine decarboxylase alpha chain; S-
Trypanosylmethionine decarboxylase beta chain].
Trypanosoma brucei brucei.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scott J.R., Ullman B.;

Molecular cloning and functional expression of the S-
Molecular cloning and functional expression of the S-
adenosylmethionine decarboxylase gene of Leishmania donovani a
Trypanosoma brucei.";

Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.

Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.

-i- CATALYTIC ACTIVITY: S-adenosyl-L-methionine - (5-deoxy-5-
adenosyl)(3-aminopropyl) methylsulfonium salt + CO(2).

-i- CORACTOR: PYRUVOYL GROUP.
                                                                                                                                                                                                                                                      SITE
                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001985; SAM_decarbox. Pfam; PF01536; SAM_decarbox; 1. ProDom; PD002379; SAM_decarbox; 1. PROSITE; PS01336; ADOMETDC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                     CHAIN
                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U20092; AAA61969.1;
HSSP; P17707; LJEN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PATHWAY: DECARBOXYLATION OF S-ADENOSYLMETHIONINE PROVIDES AMINOPROPYL MOIETY REQUIRED FOR SPERMIDINE AND SPERMINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CVPLTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: BELONGS TO THE EUKARYOTIC ADOMETDC FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BIOSYNTHESIS FROM PUTRESCINE
l Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                    biosynthesis; Lyase; Decarboxylase; Pyruvate; Zymogen.

1 85 S-ADENOSYLMETHIONINE DECARBOXYLASE BETA
CHAIN (BY SIMILARITY).
                                                                                    370
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                                                                                    41692 MW;
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                  84.2%;
83.3%;
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                                                                                                                                    SIMILARITY).
IMPORTANT FOR (
SIMILARITY).
                  Score 32;
Pred. No.
                                                                                                  SIMILARITY)
                                                                                                                                                                                                    CONVERTED TO A PYRUVOYL GROUP (BY SIMILARITY).
                                                                                                                                                                                                                                                    CHAIN (BY SIMILARITY).
CLEAVAGE (NONHYDROLYTIC)
                                                                                                                                                                                                                                                                                     S-ADENOSYLMETHIONINE DECARBOXYLASE ALPHA
                                                                                                                    IMPORTANT FOR CATALYTIC ACTIVITY
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SMART; SM00214; VWC; 1.
PROSITE; PS01208; VWFC; 1.
PROSITE; PS01185; CTCK_1; 1.
PROSITE; PS01225; CTCK_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-1994 (Rel. 30, Created)
01-OCT-1994 (Rel. 30, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
01-OCT-1996 (Rel. 34, Last annotation update)
Integumentary mucin B.1 (FIM-B.1) (Fragment).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XENLA
                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -i- SUBCELLULAR LOCATION: Secreted.
-i- TISSUE SPECIFICITY: EXPRESSED AND STORED EXCLUSIVELY IN MATURE MCOUS GLANDS OF THE SKIN.
-i- PTM: EXTENSIVELY O-GLYCOSYLATED.
-i- SIMILARITY: CONTAINS 1 VWFC DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biochemistry 29:6240-6244(1990).
-i- FUNCTION: COULD BE INVOLVED IN DEFENSE AGAINST MICROBIAL INFECTIONS. PROTECTS THE EPITHELIA FROM EXTERNAL ENVIRONMENT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P38565;
01-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "An integumentary mucin (FIM-B.1) from von Willebrand factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE=91002513; PubMed=2207068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopus.
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                                                                                                                                                                                   REPEAT
                                                                                                                                                                                                                                                                                                                  InterPro; IPR000359; Cys_knot.
InterPro; IPR001007; VWFC.
                                                                                                                                                                                                                                                                                                                                          PIR; A35281; A35281.
HSSP; P04355; 4MT2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Probst J.C., Gertzen E.-M., Hoffmann W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=8355
                                                                        DOMAIN
                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                           PF00007; Cys_knot; 1.
; SM00041; CT; 1.
                                                                                                                                                                                                                                 Amphibian skin; Glycoprotein.
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   42101
  W.
           VWFC.
CTCK.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                            8 X 11 AA TANDEM REPEATS A-P-S-E-T-T.
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 C06C86A805A3C3A4 CRC64;
                                                                                                                                                                                 (INCOMPLETE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               398
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SMART: SM00214: VWC: 4.

PROSTITE: PS01208: VWFC: 3

Developmental protein; Re
SIGNAL 1 19

CHAIN 20 940

DOMAIN 42 118

DOMAIN 689 748

DOMAIN 767 836
                                                                                                                                                                                                                                                                                               CHRD_BRARE STANDARD; PRT; 940 AA. 057472; Q9DEDB; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 01-MAR-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BRARE
                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Differential regulation of chordin expression domains in mutant zebrafish.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=98104254; PubMed=9441687; Miller-Bertoglio V.E., Fisher S.,
                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dev.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brachydanio rerio (Zebrafish) (Zebra danio)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordin precursor
                                                                                                               EMBL; AF034606; AAB93485.1; -.
EMBL; AB043968; BAB18642.1; -.
ZFIN; ZDB-GENE-990415-33; chd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Gastrula;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-42 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Halpern M.E.;
                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     233 CEPLTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CVPLTC
                                                                                                                                                                                                                                                      SIMILARITY: BELONGS TO THE CHORDIN F SIMILARITY: CONTAINS 4 VWFC DOMAINS.
                                                                                                                                                                                                                                                                                          early
                                                                                           PF00093; vwc; 4.
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                                                                                                                                                                                                                                                                                          somatogenesis, but then
                                                                                                      IPR001007; VWFC.
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                                                                                                                                                                                                                                                                   BELONGS TO THE CHORDIN FAMILY.
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83.3%;
                                              Repeat; Glycoprotein; POTENTIAL.
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VWEC
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                                    CHORDIN.
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                                                                                                                                                                                                                                                                                          decrease and are gone by 24
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Best Local s
Matches 5
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CARBOHYD
CARBOHYD
SEQUENCE
                                                                           the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commententities requires a license agreement (See http://www.isb-sib.ch/annot or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9R0B6; Q9WTW6;
Q1-MAR-2002 (Rel. 41, Created)
Q1-MAR-2002 (Rel. 41, Last sequence update)
Q1-MAR-2002 (Rel. 41, Last annotation update)
Laminin gamma-3 chain precursor (Laminin 12 gamma 3).
                 EMBL; AF083372; AAF08983.1; -.
EMBL; AF079520; AAD29851.1; -.
H$SP; P02468; 1KLO.
MGD; MGI:1344394; Lamc3.
                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                         -
                                                                                                                                                                                                                                                                                                                                                                           laminin gamma3 cháin.";
J. BLO1. Chem. 274:14107-14111(1999).
-i- FUNCTION: BINDING TO CELLS VIA A HIGH AFFINITY RECEPTOR, LAMININ IS THOUGHT TO MEDIATE THE ATTACHHENT, MIGRATION, & ORGANIZATION CELLS INTO TISSUES DURING EMBRYONIC DEVELOPMENT BY INTERACTING WITH OTHER EXTRACELLULAR MATRIX COMPONENTS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-99253969; PubMed-10318827;
Ilvanainen A., Morita T., Tryggvason K.;
"Molecular cloning and tissue-specific e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 1-1526 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (AUG-1998) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAMC3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Albus A.M., Burgeson B.,
Mouse laminin 12 gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         815 CPPLTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CVPLTC 6
                                                                                                                                                                                                                                                                       SUBUNIT: LAMININ IS A COMPLEX GLYCOPPOTEIN, CONSISTING OF THREE DIFFERENT POLYEPETIDE CHAINS (ALPHA, BETA, GAMMA), WHICH ARE BOU TO EACH OTHER BY DISULFIDE BONDS INTO A CROSS-SHAPED MOLECULE COMPRISING ONE LONG & THREE SHORT ARMS WITH GLOBULES AT EACH END THE GAMMA-3 CHAIN IS A SUBUNIT OF LAMININ-12. SUBCELLULAR LOCATION: Extracellular. TISSUE SPECIFICITY: Strongly expressed in capillaries and arterioles of kidney as well as in interstitial Leydig cells of
                                                                                                                                                                                   SIMILARITY: CONTAINS 1 LAMININ N-TERMINAL DOMAIN SIMILARITY: CONTAINS 11 LAMININ EGF-LIKE DOMAINS SIMILARITY: CONTAINS 1 LAMININ DOMAIN IV.
                                                                                                                                                                                                              DOMAIN: THE ALPHA-HELICAL DOMAINS I AND II WITH OTHER LAWININ CHAINS TO FORM A COILED DOMAIN: DOMAIN UP IS GLOBULAR.
SIMILARITY: CONTAINS 1 LAWININ N-TERMINAL I
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     IPR000561; EGF-like
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83.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chain
                                                                                                                                                                                                              LAMININ N-TERMINAL DOMAIN
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N-LINKED (GLCNAC. . .) (POTENTIAL).
9; B855CAF84F4623AC CRC64;
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N-LINKED
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Sciurognathi; Muridae; Murinae; Mus
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                                                                                          (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                            expression of a
                                                                                                                                                                                                                                     ARE THOUGHT TO INTERACT COIL STRUCTURE.
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RESULT 12
LRP2_HUMAN
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PROSITE; PS01186; EGF_2; 2.
PROSITE; PS01248; LAMININ_TYPE_EGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00052; laminin_B; 1.0. Pfam; PF00053; laminin_EGF; 10. Pfam; PF00055; laminin_Nterm; 1 PRINTS; PR00011; EGFLAMININ.
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                                                  716 CIPCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Laminin
                                                                           1 CVPLTC
                                                                                                        4;
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IPR002049; Laminin_EGF.
IPR001886; LamNT.
                                                                                                                                                                                                                                                                                                                6
                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Basement membrane; Extracellular nike domain; Cell adhesion; Repeat;
                                                                                                                                                                       AΑ;
                                                                                                                                                                       172316
                                                                                                                                                                                                                                                                                                                                                                                              EGF-LIKE 4.

N EGF-LIKE 3.

IN EGF-LIKE 4.

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AMININ EGF-LIKE 6.

AMININ EGF-LIKE 7.

AMININ EGF-LIKE 9.

LAMININ EGF-LIKE 9.

LAMININ EGF-LIKE 10.

LAMININ EGF-LIKE 11.

COILED COIL (POTENTIAL).

COILED COIL (EOTENTIAL).

COILED COIL (EOTENTIAL).
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COTLED COLL (POTENTIAL);
N-LINKED (GLCNAC...) (I
                                                                                                                                                                                                        L -> F (IN REF. 2)
P -> T (IN REF. 2)
R -> K (IN REF. 2)
G -> S (IN REF. 2)
C -> R (IN REF. 2)
C -> Y (IN REF. 2)
L -> LDEPOLFSLLLK
H -> Q (IN REF. 2)
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N-LINKED (GLCNAC...
L -> F (IN REF. 2).
P -> T (IN REF. 2).
R -> K (IN REF. 2).
G -> S (IN REF. 2).
C -> Y (IN REF. 2).
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                                                                                                                  Score 32;
Pred. No.
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V -> I (]
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                                                                                                      Mismatches
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                                                                                                                                                                      51DFAD1F95E6AE81 CRC64;
                                                                                                                                                                                 TI (IN REF.
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N EGF-LIKE 1.
N EGF-LIKE 2.
N EGF-LIKE 3.
N EGF-LIKE 4.
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2).
                                                                                                                               Length 1581;
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                                                                                                     0,
                                                                                                     Gaps
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the

European Bioinformatics Institute.

the Swiss Institute of Bioinformatics and the EMBL outstation pean Bioinformatics Institute. There are no restrictions on it

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Kounnas M.Z., Loukinova E.B., Stefansson S., Harmony J.A.K., Brewer B.H., Strickland D.K., Argraves W.S.;
"Identification of glycoprotein 330 as an endocytic receptor apolipoprotein J/clusterin.";
J. Biol. Chem. 270:13070-13075(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hjaelm G., Murray E., Crumley G., Hara Ek B., Larsson M., Juhlin C., Hellman Rask L., Morse B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LRP2_HUMAN STANDARD; PRT; 4655 AA.

P98164; 000711; Q16215;
01-0C7-1996 (Rel. 34, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Low-density lipoprotein receptor-related protein 2 precursor (Megalin)
(Glycoprotein 330).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Klareskog L., Aakerstrom G., Rask L.;
"A protein involved in calcium sensing of the human parathyroid and placental cytotrophoblast cells belongs to the LDL-receptor protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 4139-4406 FROM N.A. MEDLINE-94244704; PubMed-8187828; Lundgren S., Hjaelm G., Hellman P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strickland D.K., Argraves W.S.; "Chromosomal localization of human genes for the LDL receptor family member glycoprotein 330 (LRP2) and its associated protein RAP (LRPAPI).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Exp. Cell Res. 212:344-350(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     superfamily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=95048397; PubMed=7959795;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 3833-4453 FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (DEC-1993) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Knaak C
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-!- SIMILARITY: CONTAINS
-!- SIMILARITY: CONTAINS
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                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION
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                                                                                                                                           BIOL Chem. 270:13070-13075(1995)

BIOL Chem. 270:13070-13075(1995)

FUNCTION: BINDS SPECIFICALLY CLUSTERIN WITH HIGH AFFINITY, BUT FUNCTION: BINDS SPECIFICALLY CLUSTERIN WITH HIGH AFFINITY, BUT ALSO LIGANDS IN COMMON WITH OTHER FAMILY MEMBERS: PLASMINOGEN ACTIVATOR INHIBITOR TYPE I COMPLEX, APOLIPOPROTEIN E-ENRICHED ACTIVATOR INHIBITOR TYPE I COMPLEX, APOLIPOPROTEIN E-ENRICHED BETA-VLDL, LIPOPROTEIN LIPASE, LACTOFERIN AND CALCIUM.

FUNCTION: RECEPTOR-MEDIATED UPTAKE OF POLYBASIC DRUGS SUCH AS APROTININ, AMINOGLYCOSIDES AND POLYMYXIN B (BY SIMILARITY).

FUNCTION: MAY PARTICIPATE IN REGULATION OF PARATHYROID-HORMONE AND PARA-THYROID-HORMONE-RELATED PROTEIN RELEASE.

SUBUNIT: FORMS A MULTIMERIC COMPLEX TOGETHER WITH A RECEPTOR-
                                                                                                   SUBCELLULAR LOCATION: Type I membrane protein TISSUE SPECIFICITY: ABSORPTIVE EPITHELIA, INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ning and sequencing of human gp330, a Ca(2+)-binding receptor potential intracellular signaling properties.";
J. Biochem. 239:132-137(1996).
                                                                                     PROXIMAL TUBULES
                                                                                                                                      ASSOCIATED PROTEIN (RAP).
 SWISS-PROT
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37 LDL-RECEPTOR CLAS
17 EGF-LIKE DOMAINS.
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lman P., Davis H., Aekerstroem
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SMART; SMOOOO1; EGF_CIke; 13
SMART: SMOOOO1, EGF_1ike; 13
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| IPR000561; EGF-like.
| IPR0001881; EGF_Ca.
| IPR002172; LDL_recept_A.
| IPR000033; Ldl_receptor_roman | IPR000033; Ldl_receptor_roman | IPR00008; EGF; 13.
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PS00022; EGF_1; 1.
PS01186; EGF_2; 9.
PS01187; EGF_CA; 3.
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LDL-RECEPTOR CLASS A 1.

LDL-RECEPTOR CLASS A 2.

LDL-RECEPTOR CLASS A 3.

LDL-RECEPTOR CLASS A 4.

LDL-RECEPTOR CLASS A 5.

LDL-RECEPTOR CLASS A 5.

LDL-RECEPTOR CLASS A 6.

LDL-RECEPTOR CLASS A 7.
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  RA ANDERS G., MCCLUSKY R.T.;

POTGAN distribution in rats of two members of the low-density receptor gene family, gp330 and LRP/alpa 2MR, and the RT receptor seceptor gene family, gp330 and LRP/alpa 2MR, and the RT receptor-associated protein (RAP).";

1. Histochem. Cytochem. 42:531-542(1994).

CC. INTERVATION BINDS PLASMINOGEN ACTIVATOR INHIBITOR TYPE I COMPLEX, APOLIPOPORTEIN E-EMRICHED BETA-VLDL, LIPOPROTEIN LIPASE, CC. LACTOFERRY, CLUSTERIN ADD CALCIUM.

CC. LACTOFERRY, CLUSTERIN ADD CALCIUM.

CC. INTERVALVE FORMS A MULTIMERIC COMPLEX TOGETHER WITH A RECEPTOR-APONTININ, AMINOGLYCOSIDES AND POLYMYXIN B.

CC. APROTININ, AMINOGLYCOSIDES AND POLYMYXIN B.

CC. ASSOCIATED PROTEIN (RAP).

CC. ASSOCIATED PROTEIN (RAP).

CC. SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXPRESSED IN CLEAVAGE AT THE CELL SURFACE.

CC. TISSUE SPECIFICITY: EPITHELE FORM IS POSSIBLY DERIVED BY CLEAVAGE AT THE CELL SURFACE.

CC. PROXIMAL THERE CINC EPITE AND COMPLEX TOGETHER WITH A RECEPTOR CLEAVAGE AT THE CELL SURFACE.
                             Interpro; IPRO00152; Asx.hydroxyl.
Interpro; IPR000181; EGF_Cla.
Interpro; IPR000181; EGF_Cla.
Interpro; IPR00181; EGF_Ca.
Interpro; IPR002172; LDL_recept_A.
Interpro; IPR00033; Ldl_recept_a; 36.
Pfam; PF00057; ldl_recept_a; 33.
Pfam; PF00057; ldl_recept_b; 33.
Pfam; PF00058; ldl_recept_b; 33.
Pfam; PF00058; ldl_recept_b; 33.
SMART; SM00019; EGF_CA; 3.
SMART; SM00019; EGF_Like; 15.
SMART; SM00192; LDLa; 36.
SMART; SM00192; LDLa; 36.
SMART; SM00192; LDLa; 36.
                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as rong as resource. In the profit institutions as rong as resource. Wage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                 EMBL; L34049; AAA51369.1;
HSSP; Q07954; 1CR8.
GlycoSuiteDB; P98158; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
PROSITE; PS00022; EGF_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=94172242; PubMed=7510321; Zheng G., Bachinsky D.R., Stamenkovic I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE SPECIFICITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Evidence that epithelial polybasic drugs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Moestrup S.K., Cui s
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MEDLINE-95024033; PubMed-7937880;
Saito A., Pietromonaco S., Loo A.K.C., Farquhar M.G.;
"Complete cloning and sequencing of rat gp330/'megalin,' a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  distinctive member of the low density lipoprotein receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PISSUE SPECIFICITY: EPITHELIAL CELLS OF KIDNEY GLOMERULUS AND PROXIMAL TUBULE, LUNG, EPIDIDYMIS, YOLK SAC, AMONG OTHERS. SIMILARITY: CONTAINS 36 LDL-RECEPTOR CLASS A DOMAINS. SIMILARITY: CONTAINS 37 LDL-RECEPTOR CLASS B DOMAINS. SIMILARITY: CONTAINS 17 EGF-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Natl. Acad. Sci. U.S.A. 91:9725-9729(1994).
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                    ASX_HYDROXYL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bregengaard C., Bjorn S.E.,
sen E.I.;
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PROSITE; PS011
PROSITE; PS012
PROSITE; PS500
Glycoprotein;
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SIGNAL
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PS01187;
PS01209;
PS50068;
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      J; EGF_2; u.
J7; EGF_CA; 3.
J09; LDLRA_1; 31.
J068; LDLRA_2; 36.
LDLRA_2; 36.
JRepeat; Endocytosis; Cr
--like domain; SH3-bind'
POTENT
LOW-'
PRO'
PRO'
      \begin{array}{c} 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 1005 \\ 10
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POTENTIAL.

LOW-DENSITY LIPOPROTEIN RECEPTOR-RELATED
PROTEIN 2.
  EXTRACELLULAR (POTEN POTENTIAL).
CYTOPLASMIC (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
LDL-RECEPTOR CLASS ILDL-RECEPTOR CLASS
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OR CLASS A 1.

OR CLASS A 2.

OR CLASS A 3.

OR CLASS A 4.

OR CLASS A 5.

OR CLASS A 5.

OR CLASS A 6.

OR CLASS A 7.
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                             RESULT 14
BD05_BOVIN STANDARD; PRT; 64 AA.
ID BD05_BOVIN STANDARD; PRT; 64 AA.
AC P46163; 097533;
DT 01.NOV-1995 (Rel. 32, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 01-MAR-2002 (Rel. 41, Last annotation update)
DE Beta-defensin 5 precursor (BNDB-5) (BNBD-5).
GN DEFES OR BNBD5.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebra OC Mammalia; Butheria; Cetartiodactyla; Ruminantia; OC NOBI_TaxID=9913;
RN [11]
    RRN OCCOORDINATION
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                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
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Best Local
Matches
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DO
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CVPLTC
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5; Conserv
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                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi;
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83.3%;
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LDL-RECEPTOR CLASS A 27.
LDL-RECEPTOR CLASS A 29.
LDL-RECEPTOR CLASS A 30.
LDL-RECEPTOR CLASS A 31.
LDL-RECEPTOR CLASS A 31.
LDL-RECEPTOR CLASS A 31.
LDL-RECEPTOR CLASS A 33.
LDL-RECEPTOR CLASS A 33.
LDL-RECEPTOR CLASS A 34.
LDL-RECEPTOR CLASS A 35.
LDL-RECEPTOR CLASS A 36.
EGF-LIKE 14.
EGF-LIKE 14.
EGF-LIKE 15.
CALCIUM-BINDING (POTEN LDL-RECEPTOR CLASS B 35.
LDL-RECEPTOR CLASS B 35.
LDL-RECEPTOR CLASS B 35.
LDL-RECEPTOR CLASS B 37.
EGF-LIKE 16.
EGF-LIKE 16.
EGF-LIKE 17.
SH3-BINDING (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 32; DB Pred. No. 2.6e 0; Mismatches
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LDL-RECEPTOR (
LDL-RECEPTOR (
EGF-LIKE 11.
EGF-LIKE 12.
LDL-RECEPTOR (
LDL-RECEPT
                                                                                 Ruminantia; Pecora; Bovoidea;
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R CLASS B 30.
R CLASS B 31.
R CLASS B 32.
R CLASS B 33.
R CLASS B 33.
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CLASS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 4660;
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                                                                                                                                                                                                                                                                                                DISULFID DISULFID CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AJ278799; CAC15400.1; -. EMBL; AF014108; AAD01523.1; -. HSSP; P46170; 1BNB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Purification, primary structures, and antibacterial activities of beta-defensins, a new family of antimicrobial peptides from bovine neutrophils.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 23-64, FUNCTION, AND TIS STRAIN-HEREFORD; TISSUE-Neutrophils; MEDLINE-93203264; Pubmed-8454635;
Leptin precursor
                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00711; Defensin_beta; SMART; SM00048; DEFSN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Selsted M.E., Tang Y.-Q., Morris W.L., McGuire P.A., Novotny M.J., Smith W., Henschen A.H., Cullor J.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ryan L.K., Rhodes J., Bhat M., Diamond G.; "Expression of beta-defensin genes in bovine alveolar macrophages."; Infect. Immun. 66:878-881(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Alveolar macrophage; MEDLINE-98114406; PubMed-9453661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 1-54 FROM N.A., AND TISSUE SPECIFICITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (AUG-2000) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Beta defensin-encoding genes are selected for divergent sequences the mature anti-bacterial peptide.";
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                                                                                                                                                                                                                                                                                                                                                          MOD_RES
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TISSUE SPECIFICITY: NEUTROPHILIC GRANULES. ALVEOLAR MACROPHAGES
SIMILARITY: BELONGS TO THE BETA-DEFENSIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sminthopsis crassicaudata (Fat-tailed dunnart).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Metatheria; Dasyuromorphia; Dasyuridae; Sminthopsis.
                                                                                                                                                                                                                                                     EMBL; AF159713; AAD44337.1; -. HSSP; P41159; 1AX8.
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4825556944B69446 CRC64;
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

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## ALIGNMENTS

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1 CVPLTC 6  :     262 CIPLTC 267	Query Match 97.4%; Score 37; DB 5; Length 407; Best Local Similarity 83.3%; Pred. No. 3.7; Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps	"Genome sequence of the nematode C.elegans: A platform for investigating biology."; Science 282:2012-2018(1998). EMBL; 250029; CAA90343.2; SEQUENCE 407 AA; 46687 MW; 00F390B7952D12B5 CRC64;	SEQUENCE FROM N.A.  Kershaw J.K.; Submitted (JUL-1995) to the EMBL/GenBank/DDBJ databases.  [2] SEQUENCE FROM N.A. MEDLINE-99069613; PubMed-9851916; RODRE;	Erinae	1 18280 PRELIMINARY; PRI 18280; TremBirel 05, Creat

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01-MAR-2001 (TremBLrel. 16, Created)
01-MAR-2001 (TremBLrel. 16, Last sequence update)
01-DEC-2001 (TremBLrel. 19, Last annotation update)
DJ947L8.1.8 (NOVEL SUSHI (SCR REPEAT) DOMAIN PROTEIN)
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Mammalia; Eutheria;
NCBI_TaxID=9606;
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                         update)
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Q923L3
                     RRP RCC
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Q96RM4
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Best Local S
Matches 5
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Best Local
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Q96RM4;
Q96RM4;
O1-DEC-2001 (TrEMBLrel. 19, C
O1-DEC-2001 (TrEMBLrel. 19, L
O1-DEC-2001 (TREMBLrel. 19, L
O1-DEC-3001 (TREMBLREL. 19, L
                                                                                                                                                                Q923L3;
Q923L3;
Q1-DEC-2001
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                2677
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MEDLINE=21365705; PubMed=11472063;

MEDLINE=21365705; PubMed=11472063;

Sun P.C., Uppaluri R., Schmidt A.P., Pashia M.E., Quant E.C.,

Sunwoo J.B., Gollin S.M., Scholnick S.B.;

"Transcript map of the 8p23 putative tumor suppressor region.";

Genomics 75:17-25(2001).

Genomics 75:17-25(2001).

EMBL; AY017307; AAG552948.1; -.

EMBL; AY017307; AAG552948.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.

MEDLINE-21365705; PubMed-11472063;

Sun P.C. Uppaluri R., Schmidt A.P., Pashia Sunwoo J.B., Gollin S.M., Scholnick S.B.;

"Transcript map of the 8p23 putative tumor Genomics 75:17-25(2001).

EMBL; AF333704; AAR73475.1; -.

SEQUENCE 3508 AA; 382824 MW; 9268C3EBF3
                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                     CSMD1.
                                                                                                                                                      CSMD1.
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01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
CUB AND SUSHI MULTIPLE DOMAINS 1 PROTEIN.
                  SEQUENCE FROM N.A. STRAIN=C57BL/6;
                                                                                                                  Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
                                                                 NCBI_TaxID=10090;
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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nes 5; Conserv
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                                                                                  Chordata;
Rodentia;
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83.3%;
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83.3%;
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Pred.
                                                                                 Craniata; Ver
Sciurognathi;
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S.B.;
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39;
                                                                                                Vertebrata; Euteleostomi;
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                                                                                                                                                                                 update)
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RESULT
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Best Local
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Q9JK57;
Q1-OCT-2000 (TrEMBLrel. 15, C
01-OCT-2000 (TrEMBLrel. 15, I
01-DEC-2001 (TrEMBLrel. 19, I
PREGNANCY-ASSOCIATED PLASMA F
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Q9DGM2;
Q1-MAR-2001
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                  Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  crest and pigment pattern development in the ; Submitted (JUN-2000) to the EMBL/GenBank/DDBJ EMBL; AF275636; AAG00977.1; -. InterPro; IPR000276; GPCR_Rhodpsn.
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NCBI_TaxID=7955;
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|||:||
2733 CVPITC 2738
                                                                                        PAPPA
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PROSITE; PS00237; G_PROTEIN_RE
PROSITE; PS50262; G_PROTEIN_RE
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EMBL; AY017475; AAG54083.1; -.

SEQUENCE 3564 AA; 387865 MW; 70824C55B0674609 CRC64;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Mutational analysis of roles for endothelin receptor bl during neural crest and pigment pattern development in the zebrafish, Danio rerio.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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184
318
426
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G_PROTEIN_RECEP_F1_2;
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184
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83.3%;
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83.3%;
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PROTEIN A (FRAGMENT).
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Pred.
                  Craniata; Veri
Sciurognathi;
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10;
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                  Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
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SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=EMBRYO;
Olesen C., Hansen C., Hayashizaki Y., By
I Partial sequence of Mus musculus Mus m
T plasma protein A (Pappa).";
EL Submitted (APR-2000) to the EMBL/GenBar
DR EMBL; AF260433; AAF70319.1; -.

MGI:97479; Pappa.

Notch.
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Best Local
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                                                            Q9ES06 PRELIMINARY; PRT; Q9ES06; Q9ES06; 01-MAR-2001 (TrEMBLrel. 16, Created) 01-MAR-2001 (TrEMBLrel. 16, Last sequence of the control of the
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SEQUENCE
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DNA Res
       Mus musculus
Eukaryota; Me
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nagase T., Kikuno R., Ohara O.; "Prediction of the coding sequences of unidentified human genes. The complete sequences of 60 new cDNA clones from brain which co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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InterPro; IPR000436; Sushi_SCR_CCP
Pfam; PF00084; Sushi; 5.
SMART; SM00032; CCP; 4.
SMART; SM00004; NL; 1.
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nes 5; Conserv
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es. 8:179-187(2001).
AB067471; BAB67777.1;
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5; Conserv
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       Metazoa;
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                                          (Mouse)
Chordata;
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83.3%;
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83.3%;
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                                                                   Last sequence update)
Last annotation update)
PROTEIN-A (FRAGMENT).
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Pred. No. 11;
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musculus p
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20;
       Vertebrata;
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       Euteleostomi;
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Q9XU36;
Q9XU36;
Q1-NOV-1999 (TrEMBLrel. 12, C
01-NOV-1999 (TrEMBLrel. 12, I
01-DEC-2001 (TrEMBLrel. 19, I
                                                                                                                                                                                                                                                                        Investigating biology.";
Science 282:2012-2018(1998).
EMBL; 292782; CAB07186.1; -..
InterPro: IPR000276; GPCR.Rhodpsn.
PRINTS; PR00237; GPCRRHODDPSN.
PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
SEQUENCE 367 AA; 42394 MW; 4C72198AEAEETF8D CRC64;
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"The regulated expression of insulin-like growth factor binding protein-4-endopeptidase (Pregnancy-associated plasma protein-A) rodent ovary: A marker of the dominant follicle and of the corpu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00084; sushi; 5.
SMART; SM00032; CCP; 4.
SMART; SM00004; NL; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Caenorhabditis elegans.
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NCBI_TaxID=10090;
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Rhabditidae; Peloderinae;
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MEDLINE-99069613; PubMed-9851916;
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                                                  92°CIPVTC 97
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IPR000436; Sushi_SCR_CCP.
IPR000130; Zn_MTpeptdse.
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66.7%;
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83.3%;
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Caenorhabditis.
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28;
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Q9A1P4
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RESULT
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O9A1P4
O9A1P4;
O9A1P4;
O1-JUN-2001 (TrEMBLrel. 17, Created)
O1-JUN-2001 (TrEMBLrel. 17, Last sequence update)
O1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
....rorrhetical protein spy0169.
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Q9PTM2;
01-MAY-2000
01-MAY-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=20238035; PubMed=10772983; Bader A.G., Hartl M., Bister K.; "Conditional cell transformation by doxycycline-controlled expression of the ASV17 v-jun allele."; Virology 270:98-110(2000).
EMBL; AF172322; AAD51654.1; -.
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Coturnix (common quail).
Coturnix (common quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniata; Phasianidae; Phasianinae;
                                                                                                                                                         Ferretti J.J., McShan W.M., Ajdic D.J., Savic D.J., Savic G., Lyon K., Primeaux C., Sezate S., Suvorov A.N., Kenton S., Lai H.S., Lin S.P., Qian Y., Jia H.G., Najar F.Z., Ren Q., Zhu H., Song L., White J., Yuan X., Clifton S.W., Roe B.A., McLaughlin R.; "Complete genome sequence of an M1 strain of Streptococcus pyogenes."; Proc. Natl. Acad. Sci. U.S.A. 98:4658-4663(2001).

EMBL; AE006486; AAK33269.1; -
Hypothetical protein; Complete proteome.

SEQUENCE 66 AA; 7347 MW; 73BA4A2AA2538C5C CRC64;
                                                                                                                                                                                                                                                                                                                          STRAIN-SF370 / ATCC 700294 / SEROTYPE M1; MEDLINE-21192684; PubMed-11296296;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Firmicutes;
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SEQUENCE FROM N.A.

Hartl M., Reiter F., Bader A.G., Bister K.;

"Structure of the JAC gene locus, a putative AP-1 target.";

Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.

Submitted (FEB-2005) 1: -.

EMBL; AF172321; AAD51653.1; -.

EMBL; AF239161; AAF42955.1; -.

EMBL; AF239161; AAF42955.1; -.
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"Conditional cell transformation by doxycycline-controlled of the ASV17 v-jun allele.";
Virology 0:0-0(2000).
            "Spatial discontinuities in human immunodeficiency virus type quasispecies derived from epidermal Langerhans cells of an AID: patient and evidence for double infection.";

J. virol. 0:0-0(1994).
EMBL; 234348; CAA84119.1; -
InterPro; IPR000777; GP120.
Pfam; PF00516; GP120; 1
AIDS; Coat protein; Glycoprotein.
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01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
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ENVELOPE PROTEIN (FRAGMENT)).
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Bader A.G., Hartl M., Bister K.;
"Conditional cell transformation by doxycycline-controlled of the ASV17 v-jun allele.";
Virology 270:98-110(2000).
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STRAIN-PATIENT RI;
Sala M., Zambruno G., Vartanian J.,
Wain-Hobson S.;
                                                                                                                                                                                                Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus
NCBI_TaxID=11676;
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
Gallus.
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Peptide #1972 enco		Novel human diagno	Human parathyroid	Human kidney calci	Human placental ca	Human calcium sens	Human parathyroid	Human kidney calci	Human	Human		Drosop		Droso	Fragment of	Novel human diagno	Human polypeptide	D O	Human gene 8 encod	Human colon cancer	Arabidopsis thalia	Arabidopsis thalia	#4312		Peptide #4224 enco	olypepti	e e	_	Human laminin gamm	Drosophila melanog	Tick WGL+ antigen.	Melon MEERS protei	Propionibacterium

## ALIGNMENTS

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                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                 Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                    VEGF based monocyclic peptide 9.
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         Achen MG,
                            (LUDW-) LUDWIG INST CANCER RES
                                               18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                             18-JAN-2001; 2001WO-US01533
                                                                                                 26-JUL-2001.
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                                                                                                                                                   Disulfide-bond
        Hughes RA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Characterised by anglogenesis, neovascularisation or lymphangiogenesis.

The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid cacumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a change of the condition of the combination with an anti-inflammatory agent, to treat a change of the condition of the combination with an anti-inflammatory agent.
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Best Local
                                                                                                                                         cancer; common variable adhesion deficiency syndrome; AIDS; SCID; acquired immunodeficiency syndrome; anaemia; rheumatoid arthritis; Alzheimer's disease; Crohn's disease; liver cancer; leukaemia; Hodgkin's lymphoma; Parkinson's disease; Huntingdon's disease; dementia; artherosclerosis; stroke; diabetes mellitus; Addison's disease;
                                                                                                                                                                                                                                                                                                                           Human; Immunoglobulin superfamily protein; IgSF; Immune response; inflammatory response; cell-cell interaction; cell-surface recognition; neural disorder; immune system disorder; muscular disorder; reproductive disorder; gastrointestinal disorder; pulmonary disorder; cardiovascular disorder; renal disorder; proliferative disorder; cardiovascular disorder; renal disorder; proliferative disorder;
                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human Immunoglobulin superfamily, IgSF, protein #2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU00816 standard; Protein; 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequence represents a monomeric monocyclic peptide of the invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 100.0%; Score 38; DB 22; Similarity 100.0%; Pred. No. 6.4e+05; 6; Conservative 0; Mismatches 0;
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                                                                                                              combined
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                                                                                                                                                  inflammatory responses. Polypeptides and antibodies directed to polypeptides of the present invention are useful to provide immunological probes for differential identification of tissues. Antibodies can be used to assay levels of polypeptides encoded by polynucleotides of the invention. Polypeptides of the present invention can be used to treat or prevent diseases or conditions such as neural disorders, immune system disorders, muscular disorders, reproductive disorders as gastrointestinal disorders, pulmonary disorders, cardiovascular disorders, renal disorders, proliferative disorders, and/or cancerous disorders, renal disorders, proliferative disorders, and/or cancerous
                                                                                                                                                                                                                                                                                       The sequence is a Human Immunoglobulin superfamily, IgSF, protein, a diverse family of proteins involved in cell-cell interactions, cell-surface recognition, intercellular communication and immune and inflammatory responses. Polypeptides and antibodies directed to
                                                                                                                                                                                                                                                                                                                                                                Claim 11; Page 238-239; 247pp; English
                                                                                                                                                                                                                                                                                                                                                                                                            Isolated nucleic acid molecule encoding a human secreted protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Young PE, Ruben SM,
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(NIJJ/) NI J.
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             of diseases and disorders are
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Best Local
Cytostatic; contraceptive; antiinflammatory; immunomodulatory; and cardiovascular activities. The sequences may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate NOVX expression. They may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of protein by expressing inactive proteins or to produce NOVX proteins, by inserting the nucleic acid into a cell and culturing it to express the protein. The DNA may be used as DNA probes in assays to detect and quantitate the presence of similar DNAs in samples, and which patients may need restorative therapy. The NOVX protein may also be used as antigens in the production of antibodies (Abs) against NOVX and in assays to identify modulators of NOVX expression and
                                                                                                                                                                                                                                                                                                                                                                                      the NOV1-NOV16 proteins, and their coding sequences. The proteins have
                                                                                                                                                                                                                                                                                                                                                                                                                         This sequence is the NOV16 protein. The invention relates to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Page 50-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shimkets RA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel human polypeptides and the nucleic acids that encode them useful for preventing, diagnosing and treating e.g. cancer, inflammation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CURA-) CURAGEN CORP.
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16-NOV-2000;
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29-NOV-1999;
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DB; AAF87127.
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99US-167785P.
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOV; Cytostatic; contraceptive; antiinflammatory; immunomodulatory; cardiovascular; casein kinase II phosphorylation site; contraception; serine/threonine kinase; Peutz-Jeghers syndrome; cellular proliferation; epidermal growth factor; cell development; apoptosis; cell adhesion; growth migration; cell structure; motility; cancer; immune disorder; inflammatory disorder; cellular adhesion disorder; long-QT syndrome; cardiovascular disease; hypertrophic cardiomyopathy; marfan syndrome; therapy; NOV1; NOV2; NOV3; NOV4; NOV5; NOV6; NOV7; NOV8; NOV9; NOV10; NOV11; NOV12; NOV13; NOV14; NOV15; NOV16.
                                                                                                                                                                                                              Shimkets
                                                                                                                                                                                                                                                                                                             08-MAR-2000;
16-NOV-2000;
                                                                                                                                          N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                 17-NOV-2000; 2000WO-US31543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200136638-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NOV15 protein sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB83371 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                             (CURA-) CURAGEN CORP
                                                                                                                                                                                                                                                                                                                                                               29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                   19-NOV-1999;
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264 cvpitc 269
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                                                                                                                                          2001-648134/74.
DB; AAF87126.
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5; Conser
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2000US-187844P.
2000US-0715417.
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                                                                                                                                                                                                              Lichenstein
                                                                                                                                                                                                                                                                                                                                                                                   99US-166336P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   883 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 36; DB 22;
Pred. No. 4.3e+02;
1; Mismatches 0;
                                                                                                                                                                                                              Vernet
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                                                                                                                                                                                                              Fernandes
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Claim 1; Page 46-48; 141pp; English

immune disorders

Novel human polypeptides and the nucleic acids that encode them useful for preventing, diagnosing and treating e.g. cancer, inflammation and

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cytostatic; contraceptive; antinfiammatory; induced contraceptive; antinfiammatory; induced contraceptive; antinfiammatory; induced contraceptive; antinfiammatory; induced contraceptive; and contraceptive; antinfiammatory; induced contraceptive; and contraceptive; and contraceptive; and contraceptive; and contraceptive; and contraceptive; contraceptive; contraceptive; induced with decreased contraceptive; contraceptive; induced with decreased contraceptive; contraceptive; contraceptive; contraceptive; contraceptive; contraceptive; contraceptive; contraceptive; contraception; contracep
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                            21-APR-2000;
02-JUN-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                     SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU48199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
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                                                                                                                                                          20-APR-2001;
                                                                                                                                                                                                                                                     WO200181581-A2
                                                                                                                                                                                                                                                                                                Propionibacterium acnes
                                                                                                                                                                                                                                                                                                                                            dermatological; osteopathic; neuroprotectant
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes immunogenic protein #9095.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU48199 standard; Protein; 95 AA
                   (CORI-) CORIXA CORP
                                                                                                                                                                                                                                                                                                                                                                 inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypertrophic cardiomyopathy, long-QT syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fibrillin proteins and are used to treat cardiovascular disease e.g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     264 cvpitc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
les 5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CVPLTC 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     269
                                                              2000US-199047P.
2000US-208841P.
2000US-216747P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                       2001WO-US12865
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 36; DB 22;
Pred. No. 4.3e+02;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and marfan syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 883;
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (BLISA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Note: The sequence data for this patent did not specification, but was obtained in electronic for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Skeiky YAW, Persing DH, N
L'maisonneuve J, Zhang Y,
                                                                                                                                                                                                                                                                      stem cell proliferation; haematopoiesis; nerve tissue regeneration;
                                                                                                                                                                                                                                                                                      Human; vaccination; gene therapy; nutritional supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                       AAU32498 standard; Protein; 1603 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 at ftp.wipo.int/pub/published_pct_sequences
                              (HYSE-) HYSEQ INC
                                                             18-APR-2000; 2000US-0552929
26-JAN-2001; 2001US-0770160
                                                                                                               16-APR-2001; 2001WO-US08656
                                                                                                                                                 25-OCT-2001.
                                                                                                                                                                                 WO200179449-A2
                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                    Novel human secreted protein #2989.
                                                                                                                                                                                                                                                                                                                                                         18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treating acne vulgaris
                                                                                                                                                                                                                                                    immune suppression; immune stimulation; anti-inflammatory; leukaemia
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nes 5; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
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83.3%;
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!, Jen S, Carter D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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87;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 95;
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ormat directly from WIPO
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Tang YT,

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Drmanac RT

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RESULT
ABG1138
ID ABG1
XX ABG1
XX ABG1
XX NOVe
XX NOVe
XX Huma
KW Huma
KW Hooc
XX Homc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC The invention relates to novel human secreted polypeptides. The CC polypeptides and antibodies to the polypeptides are useful for CC determining the presence of or predisposition to a disease associated CC with altered levels of polypeptide. The polypeptides are also useful for identifying agents (agonists and antagonists) that bind to them. Cells expressing the proteins are useful for identifying a therapeutic agent for use in treatment of a pathology related to aberrant expression or CP physiological interactions of the polypeptide. Vectors comprising the nucleic acids encoding the polypeptides and cells genetically centile acids encoding the polypeptides and cells genetically CC engineered to express them are also useful for producing the proteins. They may be used to therapy, and can be used as nutritional supplements. They may be used to increase stem cell proliferation; to regulate haematopoiesis; and in CC immune suppression and/or stimulation; as anti-inflammatory agents; and in treatment of leukaemias. AAU29510-AAU33304 represent the amino acid CC sequences of novel human secreted proteins of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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Best Local
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             New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity.
                                                                                                                                                      WPI; 2001-639362/73.
N-PSDB; AAS75325.
                                                                                                                                                                                                                                                                                                                                                                           31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABG11138 standard; Protein; 1752 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 20; Page 624; 765pp; English.
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                                                                                                                                                                                                                                                                                                                (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-OCT-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel human diagnostic protein #11129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           food supplement;
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nes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CVPLTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-611725/70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chromosome mapping; gene mapping; gene therapy; forensic;
upplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                     RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1603 AA;
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                                                                                                                                                                                                                                                  Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.1%;
83.3%;
                                                                                                                                                                                                                                              Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 35;
Pred. No.
1; Mismatc
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1.1e+03;
0;
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CC The polymeration of the printed contraction, but was obtained in electronic format directly from WIPO at the printed contraction, but was obtained in electronic format directly from WIPO at the printed contraction.
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Matches
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| 1483 cvpvtc 1488
                                                    Screening biomolecule activity regulators by their effect on a biomolecule peptide interactions for identification of potential drug molecules -
                                                                                                                                                                                                                                                                                                                                                                Unidentified bacteriophage.
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                                                 molecules
                                                                                                                                                     Okamoto S,
                                                                                                                                                                                                                                                                                                                             WO200053740-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB23798;
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                                                                                                                                                                                      (AJIN ) AJINOMOTO CO INC
                                                                                                                                                                                                                           10-MAR-1999;
                                                                                                                                                                                                                                                           10-MAR-2000; 2000WO-JP01478
                                                                                                                                                                                                                                                                                              14-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                 Phage display peptide; screening; biomolecule activity regulator; drug development; liver disorder; sclerosis; cancer; hepatitis C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Phage display peptide K13 SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB23798 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 5; Conserv
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                                                                                                                   2000-587433/55
                                                                                                                                                                                                                                                                                                                                                                                                      infection
                                                                                                                                                   Miwa K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1752 AA;
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83.3%;
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Pred. No. 1.2e+03;
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Example 2; Page 24; 45pp; Japanese

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RESULT
AAU40081
ID AW 40081
AX AAU
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AX AAU
AX SAP
KW UVE
KW Ger
XX Ger
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                        Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogen polypeptides. The proteins and their associated DNA sequences are used the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis.
                                                                                                                                                                                                                                                                                           Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAS59510.
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02-JUN-2000; 2000US-208841P.
07-JUL-2000; 2000US-216747P.
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                                                                                                                                                                                                        1276; 1069pp;
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, Jen S, Carter D;
in infections of bone,
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joints and the central
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (BLISA).

Note: The sequence data for this patent did not form part of the printed as fer intermining p. the contact of the printed as the protection of the printed as pecification, but was obtained in electronic format directly from WIPO
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02-JUN-2000;
07-JUL-2000;
                                                                                                               Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful treating acne vulgaris -
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                                                                                                                                                                                                                                      Skeiky YAW,
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                                                                                                                                                                            N-PSDB;
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Sequences AAU39105-AAU68017 represent Propionibacterium acnes in polypeptides. The proteins and their associated DNA sequences at the treatment, prevention and diagnosis of medical conditions or P. acnes. The disorders include SAPHO syndrome (synovitis, acne.

are use

used

SEQ ID No 27420;

1069pp;

English.

pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis

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02-JUN-2000;
07-JUL-2000;
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Note: The sequence data for this patent did not form part of the printed as pecification, but was obtained in electronic format directly from WIPO
Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunoger polypeptides. The proteins and their associated DNA sequences are used the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                Example 1;
                                                                                                                       Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for
                                                                                                                                                                                                                   L'maisonneuve J,
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nes 5; Conser
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                                                                                                                                                                                      2001-616774/71.
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                                                                                                                                                                                                                                  YAW,
                                                                                                                                                                         AAS59609.
                                                                                                           acne vulgaris
                                                                                SEQ ID No
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2000US-208841P.
2000US-216747P.
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                                                                                                                                                                                                                 ing DH,
Zhang
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83.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immunogenic protein #28536
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                                                                             1069pp; English
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                                               immunogenic
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Best Local Similarity
~~+~hes 5; Conserv:
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CC P. acnes is also involved in infections of bone, joints and the central CC nervous system, however it is particularly involved in the inflammatory CC lesions associated with acne vulgaris. A method for detecting the CC presence or absence of P. acnes in a patient comprises contacting a CC sample with a binding agent that binds to the proteins of the invention CC and determining the amount of bound protein in the sample. The CC polypeptides may be used as antigens in the production of antibodies conjupeptides may be used as antigens in the production of antibodies conjupeptides and cC downregulate expression and activity of P. acnes polypeptides and CC diagnostic agents for determining P. acnes polypeptides and CC diagnostic agents for determining P. acnes presence, for example, by CC enzyme linked immunosorbent assay (ELISA).
CC Note: The sequence data for this patent did not form part of the printed conjunction in the proposition of the printed conjunction of the conju
                                                                                                                              Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful for treating acne vulgaris -
                                                                                                                                                                                                                                                                                                                                                                                                      21-APR-2000; 2000US-199047P.
02-JUN-2000; 2000US-208841P.
07-JUL-2000; 2000US-216747P.
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                                                                                                                                                                                                                                                                                                                   Skeiky YAW,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            uveitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SAPHO syndrome; synovitis; acne;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes immunogenic protein #16774.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-FEB-2002
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                                                                                                                                                                                                                                                                                                                                                           (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inflammatory
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                                                                                                                                                                                                                                                                                                            Persing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           me; synovitis; acne; pustulosis; hypertosis; osteomyelitis; ophthalmitis; bone; joint; central nervous system; ELISA; lesion; acne vulgaris; enzyme linked immunosorbent assav:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sion; acne vulgaris; enzyme linked immunosorbent assay; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                            DH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86.8%;
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                                                                                                                                                                                                                                                                                          Mitcham JL, Wang
, Jen S, Carter
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polypeptides. The proteins and the treatment, prevention and

Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic

and diagnosis

their associated DNA sequences diagnosis of medical conditions

caused are used

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Example 1; SEQ ID No 17073; 1069pp; English

Best Local Similarity
Matches 5; Conserv

Conservative

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CC pustulosis, hypertosis and osteomyelitis), ueitis and endophthalmitis.
CC p. acnes is also involved in infections of bone, joints and the central
CC nervous system, however it is particularly involved in the inflammatory
CC lesions associated with acne vulgaris. A method for detecting the
CC presence or absence of p. acnes in a patient comprises contacting a
CC sample with a binding agent that binds to the proteins of the invention
CC and determining the amount of bound protein in the sample. The
CC polypeptides may be used as antigens in the production of antibodies
CC specific for p. acnes proteins. These antibodies can be used to
CC downregulate expression and activity of p. acnes polypeptides and
CC diagnostic agents for determining p. acnes presence, for example, by
CC enzyme linked immunosorbent assay (ELISA).
CC Note: The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ffp.wipo.int/pub/published_pct_sequences.
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Best Local :
                                                     This invention describes a novel ethylene receptor protein and its encoding nucleic acid isolated from melon (Cucumis sp.) designated MEERS. The introduction of the gene of the invention into a plant results in plants of low ethylene sensitivity. The protein of the invention can
                                                                                                                                     Claim 1; Page 10-11; 22pp; Japanese
                                                                                                                                                                       New plant of low ethylene sensitivity \cdot useful for improving life of agricultural products
                                                                                                                                                                                                                                                                                                                                                                                                                                    Cucumis sp.
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Sequence
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                                                                                                                                                                                                                                                                                                                                      31-MAR-1998;
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                                                                                                                                                                                                                                                                                                                                                                       08-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEERS; melon; ethylene receptor; plant; low ethylene sensitivity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Melon MEERS protein
                                       improve the life of agricultural products
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        637
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Pred. No. 3.5e+02;
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Query Match

86.88;

Score 33;

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Length 637;

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RESULT
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Best Local Similarity
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                                                       The resultant immune response produced by the host is capable of damaging the plasma membrane of the gut cells of ticks feeding on the host. It can be used for vaccinating cattle against diseases caused by a wide range of tick species. See also AAN80330-35.
                                                                                              This tick WGL+ antigen, and peptide fragments of it, is useful as immunogen to induce immunity to tick infestation in a host species
                                                                                                                           Claim 19;
                                                                                                                                                                                                                                                                                                               02-JUN-1988.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WGL+ antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tick WGL+ antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAP80361;
                                     Sequence
                                                                                                                                              Vaccine contg. tick antigens – used for immunising a mammalian host, esp. cattle to induce immunity to tick infestation.
                                                                                                                                                                          N-PSDB; AAN80329.
                                                                                                                                                                                    WPI; 1988-161607/23.
                                                                                                                                                                                                        Sriskantha A,
                                                                                                                                                                                                                 Cobon GS,
                                                                                                                                                                                                                                                               16-0CT-1987;
16-0CT-1987;
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(CSIR ) COMMONWEALTH SCI IND RES ORG
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                                      688 AA;
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87AU-0009196.
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367..383
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82..98
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                                                                                                                          83pp; English.
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86.8%;
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Score 33; DB 9;
Pred. No. 1.1e+03;
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         Length 688,
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RESULT 15
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Search completed: June 17, 2002, 16:02:16 Job time: 425 sec
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| 1196 cypitc 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLU01840-ABL16175) and the encoded proteins (ABBS7037-ABB72072).
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 8232; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated nucleic acid detection reagent for detecting 1000\ \mathrm{or} more genes from Drosophila and for elucidating cell signalling and cell-cell interactions -
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N-PSDB; ABL04583.
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11-JUL-2000; 2000US-0614150.
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Pred. No. 1.8e+03;
D; Mismatches 1;
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Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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    Query
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1: /cgn2_6/ptodata/:
2: /cgn2_6/ptodata/:
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Gapop 10.0 , Gapext 0
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
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/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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    DB
 US-08-325-071-61
US-08-461-004A-65
US-08-461-004A-65
US-08-325-071-59
US-08-325-071-63
US-08-325-071-67
US-08-325-071-67
US-08-461-004A-63
US-08-461-004A-63
US-08-461-004A-63
US-08-461-004A-63
US-08-461-004A-67
US-08-461-004A-57
US-08-461-004A-57
S208144-23
US-08-462-877-84
US-08-652-877-84
US-08-652-877-86
US-08-652-877-90
US-08-852-877-90
US-08-852-877-90
US-08-852-877-90
US-08-852-877-90
US-08-852-877-90
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                                                                                                                                                Sequence 61, Appl
Sequence 65, Appl
Sequence 65, Appl
Sequence 56, Appl
Sequence 50, Appl
Sequence 63, Appl
Sequence 67, Appl
Sequence 56, Appl
Sequence 59, Appl
Sequence 67, Appl
Sequence 67, Appl
Sequence 57, Appl
Sequence 84, Appl
Sequence 86, Appl
Sequence 86, Appl
Sequence 80, Appl
Sequence 9, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 34, Appl
Sequence 34, Appl
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RESULT 1 US-08-325-071-6 Sequence 61, Patent No. 55 GENERAL INFO APPLICANT: COUNTRY: COUNT	22 22 23 23 23 24 24 24 25 26 26 27 26 27 26 27 27 28 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20
Application U Application U Application U SERTINI COBON, Stew COBON, Stew COBON, Stew MOORE, JOAN JOHNSON, La: WILLADSEN, KEMP, David SRISKANTHA, RIDING, Geo RAND, Keith INVENTION: DN INVENTION: GI SECUENCES: 70 DENCE ADDRESS: EE: Foley & L 3000 K Stree Washington, D. USA 10007-5109 READABLE FORM: PC 1007-5109 READABLE FORM: TIDM PC com NG SYSTEM: PC E: Patentin R PPLICATION DATA: TION NUMBER: DATE: 17-MAY- LICATION DATA: TION NUMBER: DATE: 07-AUG- LICATION DATA: TION NUMBER: TOTON NUMBER:	31 81.6 810 31 81.6 810 31 81.6 810 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38 30 78.9 38
tewart Gary coanna Terry Law Anthony York N, Peter Wid Harold HA, Alagacone George Alfred ith No. 5587311man DNA Encoding A Cell Membrane Glycoprotein Of A Tick Gut 71 72 73 8 Lardner reet, N.W. D.C. D.C. D.C. D.C. D.C. D.C. 10908/MS-DOS PC-DOS/MS-DOS PC-DOS/MS-DOS PC-DOS/MS-DOS PC-T1993 TA: US.708/325,071 CT-1993 TA: US.708/325,071 CT-1993 TA: US.07/926,368 UG-1992 TA: US.07/926,368 UG-1992 TA: US.07/242,196 UD-1988 UG-1997 TA: US.07/242,196 UD-1987 TA: US.07/242,196 UD-1987 UN-1987 UN-19	4 US-09-273-565-34 4 US-09-565-538-34 4 US-07-603-451A-1 1 US-08-060-822A-1 1 US-08-033-873-15 1 US-08-248-016-10 1 US-08-212-236-6 1 US-08-356-832-15 2 US-08-356-832-15 4 US-08-988-705-15 5 PCT-US94-05257-1 5 PCT-US94-05257-1 1 US-08-212-236-8 1 US-08-212-236-8 1 US-08-33-873-7 1 US-08-033-873-7
	Sequence 34, Appl Sequence 1, Appli Sequence 1, Appli Sequence 15, Appli Sequence 15, Appli Sequence 10, Appli Sequence 10, Appli Sequence 10, Appli Sequence 18, Appli Sequence 15, Appli Sequence 15, Appli Sequence 17, Appli Sequence 17, Appli Sequence 10, Appli Sequence 10, Appli Sequence 10, Appli Sequence 20, Appli Sequence 20, Appli Sequence 20, Appli Sequence 20, Appli Sequence 20, Appli

APPLICATION NUMBER: AU PI2570 FILING DATE: 19-JUN-1987 PRIOR APPLICATION DATA: AU PH9196

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; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-325-071-61
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US-08-461-004A-61
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Patent No. 6
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Best Local Similarity
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TELEX: 904136
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/08/461,004A
FILING DATE: 04-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/325,071
FILING DATE: 19-OCT-1994
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
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APPLICANT:
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APPLICANT:
APPLICANT:
                                                     FILING DATE: 06-JUL-
PRIOR APPLICATION DATA:
                                                                                                                                                       APPLICATION NUMBER: US 01 FILING DATE: 17-MAY-1993 PRIOR APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: DNA Encoding A Cell Membrane TITLE OF INVENTION: Glycoprotein Of A Tick Gut NUMBER OF SEQUENCES: 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 549 amino acids
TYPE: amino acid
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ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,
                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                     APPLICATION NUMBER: US 07/926,368 FILING DATE: 07-AUG-1992
                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                  APPLICATION NUMBER: PCT/AU87/00401
FILING DATE: 27-NOV-1987
                                                                                        APPLICATION NUMBER: 07/242,196
                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
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   APPLICATION DATA:
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SRISKANTHA, Alagacone
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RAND, Keith No. 6235283man
                                                                       06-JUL-1988
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Pred. No. 2.1e+02;
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Patent No. 5
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                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: DNA Encoding TITLE OF INVENTION: Glycoproteinumber of Sequences: 71
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner STREET: 3000 K Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 202 672 5399
TELEX: 904136
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
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                                                                             APPLICATION NUMBER: US/08/325,071
FILING DATE: 14-CCT-1993
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/062,109
FILING DATE: 17-MAY-1993
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 549 amino acids
TYPE: amino acid
TOPOLOGY: linear
                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein
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REFERENCE/DOCKET NUMBER: 600
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
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APPLICATION NUMBER: AU PHEFILING DATE: 27-NOV-1986
ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER:
FILING DATE: 19-JUN-
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                                                                                                                                                                                                                                                                                                   ZIP:
                                               APPLICATION NUMBER: US 07 FILING DATE: 07-AUG-1992
                                                                                                                                                                                                                                                                                                                              STREET: 3000 K Street, CITY: Washington, D.C.
                                                                                                                                                                                                                                                                                                                 COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: BENT, Stephen A. REGISTRATION NUMBER: 2
              APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                        RIDING, George Alfred
RAND, Keith No. 5587311man
VENTION: DNA Encoding A Cell Membrane
VENTION: Glycoprotein Of A Tick Gut
EQUENCES: 71
                                                                                                                                                                                                                                                                                                                     USA
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SRISKANTHA, Alagacone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COBON, Stewart Gary MOORE, Joanna Terry
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06-JUL-1988
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                                                                  US 07/926,368
              07/242,196
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Pred. No. 2.1e+02;
0; Mismatches 1;
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Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
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SEQUENCE CHARACTERISTICS:
LENGTH: 620 amino acid
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
TELEPAX: 202 672 5399
TELEX: 904136
                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 3000 K Street, N.W.
                                                                                                                                                                                                                                                                                                                                 APPLICANT: RAND, Keith No. 6235283man
TITLE OF INVENTION: DNA Encoding A Cell Membrane
TITLE OF INVENTION: Glycoprotein Of A Tick Gut
NUMBER OF SEQUENCES: 71
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FILING DATE: 27-NOV-1986
ATTORNEY_AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REGISTRATION NUMBER: 29,768
                                                                APPLICATION NUMBER: FILING DATE: 04-JUN-PRIOR APPLICATION DATA:
                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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FILING DATE: 27-NOV-1987
PRIOR APPLICATION DATA:
           APPLICATION NUMBER: US 08/325,071
FILING DATE: 19-OCT-1994
PRIOR APPLICATION DATA:
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PRIOR APPLICATION DATA:
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FILING DATE: 16-OCT-1987
                                                                                                                                                                                                                                                 COUNTRY:
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 APPLICATION NUMBER:
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  amino acid
  GY: linear
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MOORE, Joanna Terry
JOHNSON, Law Anthony York
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SRISKANTHA, Alagacone
RIDING, George Alfred
RAND, Keith No. 6235283man
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                     04-JUN-1995
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83.3%;
us 08/062,109
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US-08-461-004A-65
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Matches
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GENERAL INFORMATION:
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                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
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APPLICATION NUMBER: AU PH9196
APPLICATION TARE: 27-NOV-1986
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FRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/AU87/00401
APPLICATION TONE 27-NOV-1987
                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: SRISKANTHA, Alagacone
APPLICANT: RIDING, George Alfred
APPLICANT: RAND, Keith No. 5587311man
TITLE OF INVENTION: DNA Encoding A Cell Membrane
TITLE OF INVENTION: Glycoprotein Of A Tick Gut
NUMBER OF SEQUENCES: 71
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APPLICATION NUMBER:
CURRENT APPLICATION DATA:
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APPLICATION NUMBER: US 0
FILING DATE: 07-AUG-1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: AU PFILING DATE: 16-OCT-1987
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                                                                                                                                                                                                                                                                                CITY:
                                                                                                                                                                                                                                                                                                             STREET:
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                                                                                                                                                                                                                                                                     SSEE: Foley & Lardner T: 3000 K Street, N.W. Washington, D.C.
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Pred. No. 2.3e+02;
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:

APPLICATION NUMBER: US/08/325,071 FILING DATE: 14-OCT-1993

FILING DATE:

17-MAY-1993

US 08/062,109

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Query Match
Best Local Similarity
...rhes 5; Conserve
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                                                                                                                                                                                                                                                                                                                                                               Sequence 59, Application US/08325071 Patent No. 5587311
                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: COBON,
APPLICANT: MOORE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
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APPLICATION NUMBER: AU PI4912
FILING DATE: 16-OCT-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU PI2570
                                                                                                                                          APPLICANT: KEMP, David Harold
APPLICANT: SRISKANTHA, Alagacone
APPLICANT: RIDING, George Alfred
APPLICANT: RAND, Keith No. 5587311man
TITLE OF INVENTION: DNA Encoding A Cell Membrane
TITLE OF INVENTION: Glycoprotein Of A Tick Gut
NUMBER OF SEQUENCES: 71
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
TELEFAX: 202 672 5399
   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                         CORRESPONDENCE ADDRESS:
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PRIOR APPLICATION DATA:
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APPLICATION NUMBER: PCT/AU87/00401
FILING DATE: 27-NOV-1987
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PRIOR APPLICATION UNMBER: 07/242,196
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       147 CVPTTC 152
                                                               STREET: 3000 K Street, CITY: Washington, D.C.
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                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: AU PFILING DATE: 27-NOV-1986
                                       ZIP: 20007-5109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: BENT, Stephen A. REGISTRATION NUMBER: 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                          ADDRESSEE:
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                                                                                     E: Foley & Lardner
3000 K Street, N.W.
                                                         USA
                                                                                                                                                                                                                                                                       WILLADSEN,
                                                                                                                                                                                                                                                                                                          MOORE, Joanna Terry
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Floppy disk
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Pred. No. 2.4e+02;
Viematches 1; Indels
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US-08-325-071-63
; Sequence 63, Application US/08325071
; Patent No. 5587311
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APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
TELEFAX: 202 672 5399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                    APPLICANT: KEMP, David Harold
APPLICANT: SRISKANTHA, Alagacone
APPLICANT: RIDING, George Alfred
APPLICANT: RAND, Keith No. 5587311man
TITLE OF INVENTION: DNA Encoding A Cell Membrane
TITLE OF INVENTION: Glycoprotein Of A Tick Gut
NUMBER OF SEQUENCES: 71
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                                     NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS
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PRIOR APPLICATION DATA:
APPLICATION UNMBER: AU PH9196
FILING DATE: 27-NOV-1986
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FILING DATE: 27-NOV-1987
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   STREET:
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                      ADDRESSEE:
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3: Foley & Lardner
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06-JUL-1988
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Pred. No. 2.4e+02;
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US-08-325-071-67
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                                                                                          APPLICANT: COBON, Stewart Gary
APPLICANT: MOORE, Joanna Terry
APPLICANT: MOORE, Joanna Terry
APPLICANT: WILLADSEN, Law Anthony York
APPLICANT: WILLADSEN, Peter
APPLICANT: KEMP, David Harold
APPLICANT: RIDING, George Alfred
APPLICANT: RAND, Keith No. 5587311man
APPLICANT: RAND, Keith No. 5587311man
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Best Local :
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INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 650 amino acids
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                                   APPLICANT: RAND, KE TITLE OF INVENTION: TITLE OF INVENTION:
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APPLICATION NUMBER: AU PH9196
FILING DATE: 27-NOV-1986
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
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FILING DATE: 06-JUL-1988
PRIOR APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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   NUMBER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: BENT, Stephen A. REGISTRATION NUMBER: 29,768 REFERENCE/DOCKET NUMBER: 60
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Patentin Release #1.0, Version #1.25
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   OF SEQUENCES:
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DNA Encoding A Cell Membrane Glycoprotein Of A Tick Gut 71
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Pred. No. 2.4e+02;
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; TOPOLOGY: linear
; MOLECULE TYPE: pro
US-08-325-071-67
                                                                                                                                                              US-08-461-004A-56
                                                                                                                                                                                RESULT
                                                                                                                              Sequence 56, Application US/08461004A Patent No. 6235283
                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                        Query Match
                                                                               GENERAL INFORMATION:
APPLICANT: COBON,
APPLICANT: MOORE,
                                                                                                                                                                                                                                                                                                             Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 650 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
TELEFAX: 202 672 5399
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APPLICATION NUMBER: PCT/
FILING DATE: 27-NOV-1987
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PRIOR APPLICATION UNMBER: US 08/062,109
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                    APPLICANT
                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION: NAME: BENT, Stephen A.
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MEDIUM TYPE: Floppy disk
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     APPLICANT:
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                                                                                                                                                                                                                             147 CVPTTC 152
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                                                                                                                                                                                                                                                                                          Local Similarity hes 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: AU PFILING DATE: 27-NOV-1986
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3000 K Street, N.W.
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                                                                               MOORE, Joanna Terry
JOHNSON, Law Anthony York WILLADSEN, Peter KEMP, David Harold SRISKANTHA, Alagacone RIDING, George Alfred
                                                                                                                                                                                                                                                                                          Conservative
                                                                                              COBON, Stewart Gary
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Pred. No. 2.4e+02;
                                                                                                                                                                                                                                                                                                                       Length 650;
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US-08-461-004A-59; Sequence 59, Application US/08461004A; Patent No. 6235283; GENERAL INFORMATION:
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                                                                            RESULT
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                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/AU87/00401
FILING DATE: 27-NOV-1987

PRIOR APPLICATION DATA:
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FILING DATE: 17-MAY-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/926,368
FILING DATE: 07-AUG-1992
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FRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 08/062,109
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,004A
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatit
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APPLICATION NUMBER: AU P
FILING DATE: 27-NOV-1986
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PRIOR APPLICATION NUMBER: US 08/325,071
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TITLE OF INVENTION: DNA Encoding A Cell Membrane
TITLE OF INVENTION: Glycoprotein Of A Tick Gut
NUMBER OF SEQUENCES: 71
                                                                                                                            147 CVPTTC 152
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FILING DATE: 19-JUN-1987
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les 5; Conservative
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SYSTEM: PC-DOS/MS-DOS
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Pred. No. 2.4e+02;
0; Mismatches 1
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                                                                          Matches
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Matches 5; Conserv
                                                                                                        Query Match
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SEQUENCE CHARACTERISTICS:
LENGTH: 650 amino acid
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APPLICATION NUMBER: AU P
FILING DATE: 19-JUN-1987
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FILING DATE: 07-AUG-
PRIOR APPLICATION DATA:
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FILING DATE: 04-UUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/325,071
FILING DATE: 19-OCT-1994
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US 08/062,109
FILING DATE: 17-MAY-1993
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APPLICATION NUMBER:
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MEDIUM TYPE: Floppy disk
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     147 CVPTTC 152
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                                       1 CVPLTC 6
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RIDING, George Alfred
RAND, Keith No. 6235283man
                                                                          Conservative
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07-AUG-1992
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                                                                                        86.8%;
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                                                                                        Score 33;
Pred. No.
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                                                                          Mismatches
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                                                                                          2.4e+02;
                                                                                                        DB 4;
                                                                                                          Length 650;
                                                                        Indels
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Gaps

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US-08-461-004A-63
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                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/AU87/00401
FILING DATE: 27-NOV-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,00
                                                SEQUENCE CHARACTERISTICS:
LENGTH: 650 amino acid
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APPLICANT: SRISKANTHA, Alagacone
APPLICANT: RIDING, George Alfred
APPLICANT: RAND, Keith No. 6235283man
TITLE OF INVENTION: DNA Encoding A Cell Membrar
TITLE OF INVENTION: Glycoprotein Of A Tick Gut
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FILING DATE: 27-NOV-
PRIOR APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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MOLECULE TYPE:
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                  COPOLOGY:
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                             amino acid
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                                                650 amino acids
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                                                                                                                         202 672 5399
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19-OCT-1994
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27-NOV-1986
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RESULT 12
US-08-461-004A-67
; Sequence 67, Applica
; Sequence 6235283
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             INFORMATION FOR SEQ ID NO:
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                                                           REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 60
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202,672,5300
                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU P
FILING DATE: 27-NOV-1986
                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: AU P14912
FILING DATE: 16-OCT-1987
                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 07-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/242,196
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 01 FILING DATE: 17-MAY-1993 PRIOR APPLICATION DATA:
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PRIOR APPLICATION UMBER: US 08/325,071
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MEDIUM TYPE: Floppy disk
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APPLICANT: RAND, Keith No. 6235283man
TITLE OF INVENTION: DNA Encoding A Cell Membrar
TITLE OF INVENTION: Glycoprotein Of A Tick Gut
                                                                                                                             FILING DATE: 27-NOV-1986
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
                                                                                                                                                                                                                                           FILING DATE: 16-OCT-PRIOR APPLICATION DATA:
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PRIOR APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
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                      TELEFAX: 201
TELEFAX: 904136
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FILING DATE: 19-OCT-1994
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                                   TELEPHONE: 202 672 5399
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FILING DATE: 07-AUG-1992
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CHARACTERISTICS:
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                                                                                                                           Stephen A
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               67
                                                                                             60042/152
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Pred. No. 2.4e+02;
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; LENGTH: 650 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-461-004A-67
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Best Local Similarity
""trhes 5; Conserva
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US-08-325-071-57
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                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/325,071
FILING DATE: 14-CCT-1993
PRIOR APPLICATION UNMBER: US 08/062,109
PILING DATE: 17-MAY-1993
PRIOR APPLICATION UNMBER: US 08/062,109
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                FILING DATE: 16-OCT-1987 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                  FILING DATE: 27-NOV-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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                                                                    ATTORNEY/AGENT INFORMATION:
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REFERENCE/DOCKET NUMBER: 60042/111 BIAU ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Foley & Lardner STREET: 3000 K Street, N.W. CITY: Washington, D.C.
                                 NAME: BENT, Stephen A. KEGISTRATION NUMBER: 29,768
                                                                                          APPLICATION NUMBER: FILING DATE: 27-NO
                                                                                                                                                             APPLICATION NUMBER:
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                                                                                                                                              FILING DATE:
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MOORE, Joanna Terry
JOHNSON, Law Anthony York
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                                                                                                                                                                                                                                                                                                       UMBER: 07/242,196
06-JUL-1988
                                                                                                                                              19-JUN-1987
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Pred. No. 2.4e+02;
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Matches 5; Conserv
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Best Local
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TELEX: 904136
INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08/
FILING DATE: 19-OCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 17-MAY-1993
PRIOR APPLICATION DATA:
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LENGTH: 688 amino acids
                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 07-AUG-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: DNA Encoding A Cell Membra TITLE OF INVENTION: Glycoprotein Of A Tick Gut NUMBER OF SEQUENCES: 71
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APPLICANT:
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                PRIOR APPLICATION DATA:
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                              APPLICATION NUMBER: FILING DATE: 19-JUN
                                                                               APPLICATION NUMBER: AU PFILING DATE: 16-OCT-1987
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APPLICATION NUMBER:
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MOORE, Joanna Terry
JOHNSON, Law Anthony York
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SRISKANTHA, Alagacone
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                             06-JUL-1988
                                                                                                                                                                                                                          UMBER: US 07/926,368
07-AUG-1992
                          19-JUN-1987
                                                                                                                               27-NOV-1987
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                                                                                                                                             PCT/AU87/00401
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AU PH9196
                                                                                               AU PI4912
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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RESULT 15
5208144-23
;Patent No. 5208144
; Patent No. 5208144-23
; Patent No. 5208144
; Patent No. 5208148
; Paten
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TELEX: 904136

INFORMATION FOR SEQ ID NO: 57:
SEQUENCE CHARACTERISTICS:
LENGTH: 688 amino acids
TYPE: amino acid
TOPOLOGY: linear
US-08-461-004A-57
Search completed: June 17, 2002, 15:56:39 Job time: 88 sec
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                                                                                                                                                                                                                                                                                                                                                                         Query Match 84.2%;
Best Local Similarity 83.3%;
Matches 5; Conservative (
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Best Local Similarity 83.3%;
Matches 5; Conservative
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157 CVPTTC 162
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NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 60042/152
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
TELEPAX: 202 672 5399
TELEPAX: 202 672 5399
                                                                                                                                                                                                        1 CVPLTC 6
||| ||
2 CVPKTC 7
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                                                                                                                                                                                                                                                                                                                                                                     Score 32; DB 6; Length 38; Pred. No. 26; 0; Mismatches 1; Indels
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GenCore version 4.5
Copyright (c) 1993 - 2000 Comp
  Compugen Ltd
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OM protein - protein search, using sw model

Run on: June 17, 2002, 15:58:26 ; Search time 95.43 Seconds (without alignments) 10.069 Million cell updates/sec

Sequence: Perfect score: US-09-761-636A-13 56 CISVPLSVPC 10

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 283138 seqs, 96089334 residues

Total number of hits satisfying chosen parameters: 283138

Minimum DB seg length: Maximum DB seg length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

pir2:\*
pir3:\*
pir4:\* pir1:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

### SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	տ	4	ω	2	1	NO.	Result
35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	36	36	36	36	36	36	36	37	37	38	38	38	39	39	Score	)
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N	N	N	2	N	N	N	Ν	Ν	N	N	2	2	N	N	N	N	N	N	N	N	2	N	N	N	-	N	N	N	B	
G72115	G86506	D71289	B70668	D87063	в86926	A70877	D75437	T50982	T15039	A83171	S72711	149529	JC7593	F72751	T08827	S46742	н96759	G83136	G75515	B86781	D45835	A33647	F82521	D71864	JC4999	F86298	G82599	T44555	<u> </u>	•
	hypothetical prote		probable Acyl-CoA		acyl-CoA synthetas	probable acyl-coAs	DNA repair protein			o	masC protein - Myc	transcription fact	0			hypothetical prote		probable amino aci	_	pro		+		hypothetical prote		ge	_	othetical prot	Description	

U	<u>3</u> 5	62.5	1162	N	в97852	hypothetical prote
_	34	60.7	38	Ν	C54471	agitoxin 3 - scorp
2	34	60.7	77	2	D97718	acetate kinase (Ac
w	34	60.7	156	2	H71023	hypothetical prote
_	34	60.7	249	N	AD0966	probable PTS syste
0,	34	60.7	250	ν	S06314	regulatory protein
01	34	60.7	252	2	в33538	regulatory protein
7	34	60.7	328	N	F89914	hypothetical prote
w	34	60.7	387	N	T44873	probable secreted
v	34	60.7	399	N	AD2559	hypothetical prote
U	34	60.7	410	2	I38502	gene Brn-3b protei
_	34	60.7	440	N	148291	transcription fact
~	34	60.7	461	۲	KXHU	protein C (activat
w	34	60.7	502	N	C95349	hypothetical prote
-	34	60.7	527	N	H85135	hypothetical prote
U	34	60.7	554	N	JE0303	propanediol dehydr

# ALIGNMENTS

C;Accession: T44555; E83568
R;Nakayama, K.; Takashima, K.; Ishihara, H.; Shinomiya, T.; Kageyama, M.; Kanaya, submitted to the EMBL Data Library, August 1999
A;Description: Genetic relationship between bacteriocins and bacteriophages.
A;Reference number: Z22790
A;Accession: T44555 hypothetical protein PA0631 [imported] - Pseudomonas aeruginosa (strain PA01) C;Species: Pseudomonas aeruginosa C;Date: 31-Jan-2000 #sequence\_revision 31-Jan-2000 #text\_change 06-Oct-2000 C;Accession: T44555; E83568 .; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
A;Title: Complete genome sequence of Pseudomonas aeruginosa PAO1, an A;Reference number: A82950; MUID:20437337
A;Accession: E83568 A;Cross-references: EMBL:AB030825; PIDN:BAA83170.1
A;Experimental source: strain PAOI
R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, QΥ A;Cross-references: GB:AE004498; GB:AE004091; NID:g9946491; PIDN:AAG04020.1; GSPDI A;Experimental source: strain PAO1 A;Status: preliminary A;Molecule type: DNA A;Residues: 1-85 <STO> A; Molecule type: DNA A; Residues: 1-85 < NAK> A; Status: preliminary; translated from GB/EMBL/DDBJ A;Gene: PA0631 C; Genetics: Query Match Best Local Similarity "--+ches 6; Conser" 2 ISVPLSVPC 10 Conservative 69.6%; 66.7%; Score 39; DB Pred. No. 6; 2; Mismatches DB 2; 1; Length 85 Indels 0 opportunisti Gaps Hickey, M Larbig, K 0,

27 VEVPLAVPC 35

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G82599

hypothetical protein XF2118 [imported] - Xylella fastidiosa (strain 9a5c)
C;Species: Xylella fastidiosa
C;Date: 18-Aug-2000 #sequence\_revision 20-Aug-2000 #text\_change 20-Aug-2000
C;Accession: G82599
C;Accession: G82599
R;anonymous, The Xylella fastidiosa Consortium of the Organization for Nucleotide
Nature 406, 151-157, 2000

A; Title: The genome sequence of the plant pathogen Xy lella fastidiosa. A; Reference number: A82515; MUID: 20365717

for a complete list of authors see reference number A59328 below

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R;Simpson, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, R.; Abriones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carrer, H. as-Neto, E.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S. submitted to GenBank, June 2000
A;Authors: Ferreira, W.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohm J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Laigu chado, M.A.; Madeira, A.M.B.N.; Madeira, A.Y.; Marino, C.L.; Marques, M.V.; Martins, E.A.T.; Matsukuma, A.Y.; Menck, C.F.M.; Miracca, E.C.; Miyaki, C.Y.; F.G.; Nunes, M.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Palmieri, D.R. Rodrigues, V.; Rosa, A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sawasak, A.Z. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sawasak, A.Z. de Salva, A.C., de Silva, A.C., de Silva, A.M.; Silva Jr., W.A.; da Silva, A.R. Salvai, A.R. Salvai,
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Nature 408, 816-820, 2000

A.Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E. C.A.; Ll, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.

Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.

A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.

Ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.

A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.

A;Reference number: A86141; MUID:21016719
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Grandes 6; Conserv
IMP dehydrogenase (EC 1.1.1.205) - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
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C: Keywords: GMP blosynthesis; NAD; oxidoreductase
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A;Molecule type: DNA
A;Residues: 1-502 <STO>
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C:Species: Arabidopsis thaliana (mouse-ear cress)
C:Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 27-Nov-2001
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A; Status: preliminary
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Best Local
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85.7%;
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Pred. No. 10;
3; Mismatches
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hypothetical protein XF2736 [imported] - Xylella fastidiosa (strain 9a5c) C;Species: Xylella fastidiosa C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 20-Aug-20 C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #sequence_revision 20-Aug-2000 #sequence_revision 20-Aug-2000 #sequence_revision 20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-Aug-20-A
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R;Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith,
C;Accession: F82521
R;anonymous, The Xylella fastidiosa Consortium of the Organization for Nucleotide Nature 406, 151-157, 2000
A;Title: The genome sequence of the plant pathogen Xylella fastidiosa.
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A;Experimental source: strain J99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: Genomic sequence comparison of two unrelated isolates of the A;Reference number: A71800; MUID:99120557 A;Accession: D71864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Ives, C.; Gibson, R.; Me
Nature 397, 176-180, 1999
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A; Variety: strain J99
C; Date: 12-Feb-1999 #sequence_:
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A;Description: provides precursors for DNA and RNA biosynthesis; it catalyzes the C;Superfamily: IMP dehydrogenase; CBS homology; IMP dehydrogenase amino-terminal h C;Keywords: GMP biosynthesis; NAD; oxidoreductase; purine nucleotide biosynthesis F;20-86/Domain: IMP dehydrogenase amino-terminal homology <IDHN>
                                                                                                                                                                                                                                                                                      F82521
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A; Residues: 1-616 <ARN>
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F;221-465/Domain: IMP dehydrogenase catalytic homology <IMP>
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A;Title: Cloning and characterization of the A;Reference number: JC4999; MUID:97045815
A;Accession: JC4999
                                                                                                                                                                                                                                                                                                                       RESULT
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A; Residues: 1-503 <COL>
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C;Accession: JC4999
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Best Local S
Matches 7
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Best Local
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les 6; Conser
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85.7%;
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77.8%;
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genome sequence

of the

plant pathogen Xylella

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Ly6 homolog RK3 precursor - rat (.) Species: Rattus norvegicus (Norway rat) (.) Species: Rattus norvegicus (Norway rat) (.) Date: 03-Mar-1994 #sequence_revision 03-Mar-1994 #text_change 31-Jan-2000 (.) Accession: D45835; C45835 (.) R.Friedman, S.; Palfree, R.G.E.; Sirlin, S.; Haemmerling, U. Immunogenetics 31, 104-111, 1990 A.;Title: Analysis of three distinct Ly6-A-related cDNA sequences isolated from rat kidne A; Reference number: A45835; MUID:90152758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sulfated surface glycoprotein 185 - Volvox carteri
C;Species: Volvox carteri
C;Species: Volvox carteri
C;Date: 11-Apr-1990 #sequence_revision 11-Apr-1990 #text_change 21-Jul-2000
C;Accession: A33647
R;Ertl, H.; Mengele, R.; Wenzl, S.; Engel, J.; Sumper, M.
J. Cell Biol. 109, 3493-3501, 1989
A;Title: The extracellular matrix of Volvox carteri: molecular structure of the A;Reference number: A33647; MUID:90094551
A;Accession: A33647
                                                                                                                                                                                                                      RESULT
D45835
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A;Experimental source: strain 9a5c
R;Simpson, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, Briones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carraro, E.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S.
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Best Local Similarity
6; Conserv
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A; Residues: 1-485 <ERT>
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A; Residues: 1-89 <SIM>
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Best Local Similarity
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66.7%;
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Pred. No.
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Pred. No.
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                                                 A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-256 <WHI>
                                                                                                        A;Reference number: A75250; MUID:20036896
A;Accession: G75515
                                                                                                                                                                                    R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
       A;Cross-references: GB:AE001906; GB:AE000513; NID:g6458151; PIDN:AAF10050.1; PID:A;Experimental source: strain R1
                                                                                                                                                                                                                                                                               conserved hypothetical protein - Deinococcus radiodurans (strain R1)
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 17-Mar-2000
C;Accession: G75515
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128 CINLPLQIP 136

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A;Experimental source: clone RK11
C;Superfamily: Ly-6 antigen; Ly-6 homology
C;Keywords: blocked carboxyl end; glycoprotein; lipoprotein; phosphatic
F;1-26/Domain: signal sequence #status predicted <SIG>
F;27-105/Product: Ly6 homolog RK3 #status predicted <MAT>
F;106-134/Domain: carboxyl-terminal propeptide #status predicted <CTP>
F;105/Modified site: GPI-anchor ethanolamine amidated carboxyl end (Ass
                                                                                                                                                                                           A;Cross-references: GB:AE005176; PID:g12724223; PIDN:AAK05348.1; GSPDB:GN00146
A;Experimental source: strain IL1403
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein ymhC {imported} - Lactococcus lactis subsp. lactis (strain C;Species: Lactococcus lactis subsp. lactis C;Species: Lactococcus lactis subsp. lactis C;Date: 23-Mar-2001 #sequence_revision 23-Mar-2001 #text_change 03-Aug-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 2-134 <FR2>
A;Cross-references: GB:M30691; NID:g205251; PIDN:AAA41548.1; PID:g205252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:M30690; NID:g205249; PIDN:AAA41547.1; PID:g205250 A;Experimental source: clone RK3 A;Accession: C45835
                                                                                                                                                                  A; Gene: ymhC
                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-207 <STO>
                                                                                                                                                                                                                                                                                                                                                             A; Title: The complete genome sequence of the lactic acid bacterium Lactococcus A; Reference number: A86625; MUID:21235186; PMID:11337471
                                                                                                                                                                                                                                                                                                                                                                                                             R;Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, Genome Res. 11, 731-753, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Accession: B86781
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A; Residues: 1-134 <FRI>
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nes 6; Conserv
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1 CISVPLSVP 9
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Pred. No.
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C;Accession: G83136
R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, M.J. adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, K.; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
A;Title: Complete genome sequence of pseudomonas aeruginosa PA01, an opportunistic A;Reference number: A82950; MUID:20437337
                                                                                   A;Cross-references: GB:AE005173; NID:g11120803; PIDN:AAG30983.1; GSPDB:GN00141 C;Genetics:
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A:Molecule type: DNA
A:Residues: 1-496 <STO>
A:Cross-references: GB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    probable amino acid permease PA4072 [imported] - Pseudomonas aeruginosa (strain PA01)
C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000
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A; Residues: 1-512 <STO>
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Best Local
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Pred. No. 1.1e+02;
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K.; Lim,
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hypothetical protein APE0003 - Aeropyrum pernix (strain K1) C;Speciles: Aeropyrum pernix (c;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Jun-2000 C;Accession: F72751
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Query Match ,

64.3%;

Score

36; DB

<u>ب</u>

Length 512;

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C;Species: Saccharomyces cerevisiae
C:Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 23-Mar-2001
C;Accession: S46742
                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 21-Jul-2000
C;Accession: T08827
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C; Keywords: transme
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A; Introns: 75/3;
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A; Residues: 1-669 <WIN>
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A;Title: Identification of three additional genes contiguous to the glucocerebrosi A;Reference number: Z16482; MUID:97474796
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A; Residues: 1-581 < DUZ>
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                                                                                                                                                                                                                               A; Gene: cote1
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Matches 5; Conserv
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139 CPSVPLLRPC
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nes 7; Conserv
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70.0%;
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Pred. No. 1.5e+02;
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Pred. No. 1.3e+02;
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R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K.; Takahawa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; K DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropyr A;Rocession: F72751
A;Reference number: A72450; MUID:99310339
A;Accession: F72751
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-100 < KAWD
A;Residues: 1-100 < KAWD
A;Residues: 1-100 < KAWD
A;Residues: 1-100 < KAND
A;Experimental source: strain Kl
C;Genetics:
A;Gene: APE0003
C;Superfamily: Aeropyrum pernix hypothetical protein APE0003
C;Superfamily: Aeropyrum pernix hypothetical protein APE0003
C;Superfamily: Aeropyrum pernix hypothetical protein APE0003
Ouery Match
Best Local Similarity 71.4%; Pred. No. 35;
Matches 5; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 4 VPLSVPC 10
Db 57 IPLTVPC 63
Search completed: June 17, 2002, 15:58:27
Job time: 196 sec
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Maximum Match 100%
Listing first 45 s
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Copyright (c) 1993 - 2000
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IMH1_ARATH
Y396_HELPJ
CG2A_CHLVR
SSGP_VOLCA
YHJ2_YEAST
COTE_HUMAN
YMA2_MYCBO
MAF1_MOUSE
MAF1_RAT
V1BF1_MYCLE
SY21_MYCTU
FD21_MYCLE
SY21_HUMAN
SCA3_LEIQH
LUXR_VIBF1
V027_FOWPV
BR3B_HUMAN
SCA3_LEIQH
LUXR_VIBF1
V027_FOWPV
BR3B_HUMAN
SCA3_LEIQH
AV1E1_DICDI
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Q95834 arabidopsis
Q92kf3 helicobacte
P51986 chlorohydra
P21997 volvox cart
P38767 saccharomyc
P81408 homo sapien
Q02278 mycobacteri
P54841 mus musculu
P54842 rattus norv
Q9j552 fowlpox vir
Q9j552 fowlpox vir
Q9d411 mycobacteri
P54200 mycobacteri
P5473 homo sapien
P12746 vibrio fisc
Q9j5h4 fowlpox vir
Q12837 homo sapien
Q12746 vibrio fisc
Q9j5h4 dictyosteli
P04070 homo sapien
Q15746 dictyosteli
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P54844 rattus norv
P23091 avian muscu
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P54813 homo sapien
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Query Match Best Local Similarity

75.0%;

Score 42; Pred. No.

DB 4.3; 1.

Query Matcl Best Local	DR EMBL; X DR Interpr DR Interpr DR Pfam; p; DR Pfam; p; DR Pfam; p; DR Pfam; p; CRAIN FT CHAIN FT CHAIN FT CHAIN FT REPEAT FT REPEAT FT TOMAIN FT DOMAIN	CC This SW CC the Eury CC use by CC modifie CC or send CC or send	RP SEQUENC RX MEDLINE RA MILLWART RA GILBERT		אז ער	& & & & & & & & & & & & & & & & & & &
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75.0%; 60.0%;	3,134.1; 3; CBD_5. 5; 21co_hy 5; 2. 0_hydro_26 hydro_26 hydro_25 hydro_26 hydro_26 hydro_26 5569 569 569 569 5769 486 486 64115 MW;	LONGS TO FA	piromyces duplicatio 1.41:183 L. 141:183 ITY: Rando nans, gala nans. 3 JAR REP CONGS TO FA	34, Created) 34, Last seque 36, Last annosidase ca-mannosidase peta-D-mannan peta-Dytridiomycos s; Piromyces.	TANDARD;	573 1 F 663 1 F 663 1 F 7 84 1
Score 42; DB 1; Length Pred. No. 4.3;	DR InterPro; IPR002883; CBD_5. DR InterPro; IPR002883; CBD_5. DR InterPro; IPR000805; Glyco_hydro_26. DR Pfam; PF02013; CBD_5; 2. DR Pfam; PF02013; CBD_5; 2. DR Pfam; PF02156; Glyco_hydro_26; 1. DR PINNS; PR00739; GLHYDRLASE26. DR PINNS; PR00739; GLHYDRLASE26. FT SIGNAL 1 18 POTENTIAL. FT SIGNAL 1 19 569 POTENTIAL. FT SIGNAL 490 569 2 X 39 AA APPROXIMATE REPEATS. FT REPEAT 488 525 1. FT REPEAT 488 525 1. FT REPEAT 531 569 2 X 39 AA APPROXIMATE REPEATS. FT DOMAIN 473 477 POLY-ASN. SQ SEQUENCE 569 AA; 64115 MW; 19277764E18328B5 CRC64;	wilk 26 OF GLYCOSYL HYDRO right. It is produced the of Bioinformatics and the of Bioinformatics and the nstitute. There are no lons as long as its contains as long as its contains as its s not removed. Usage by greement (See http://www.sb-sib.ch).	, Black G.W., Hazlewood ( , Black G.W., Hazlewood ( gene family encoding endu188(1996). in hydrolysis of 1,4-beta ctomannans, glucomannans ctomannans, rearrant of the control of the c	34, Created) 34, Last sequence update) 36, Last annotation update) beta-mannosidase C precursor (EC 3.2.1 4-beta-D-mannan mannanohydrolase C). 4-beta-p-mannan mannanohydrolase C). ; Chytridiomycota; Neocallimasticales; eae; Piromyces.	ALIGNMENTS PRT; 569 AA.	C114_MOUSE FD25_MYCTU T952_MOUSE T952_HUMAN IBPL_TACTR SCXA_MESMA GTT2_MUSDO GTT3_MUSDO GTT4_MUSDO REP2_SCHPO ATP1_CHNE PLFR_MOUSE
569;	eat. PEATS:	rough a collaboration ne EMBL outstation restrictions on its cent is in no way and for commercial isb-sib.ch/announce/	3.P., D-1,4-mannanases D-mannosidic , and E IN MANA, MANC	L.78) (Beta-		P19467 mus musculu Q50586 mycobacteri P58021 mus musculu Q99805 homo sapien Q61705 mesobuthus P46431 musca domes P46432 musca domes P46433 musca domes Q61705 mesobuthus P46430 musca domes P46430 musca domes P46430 musca domes P46430 musca domes

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RESULT 3
IMH2_ARATH
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Best Local
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Eukaryota; Fungi; Chy
Neocallimasticaceae;
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P55297;
01-CCT-1996 (Rel. 34, Created)
01-CCT-1996 (Rel. 34, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
Mannan endo-1,4-beta-mannosidase B precursor (EC 3.2.1.78) (Beta-mannanse B) (1,4-beta-D-mannan mannanohydrolase B).
                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF02013; CBD_5; 2.
Pfam; PF02156; Glyco_hydro_26; 1.
PRINTS; PR00739; GLHYDRLASE26.
                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X97408; CAA66061.1; -.
InterPro; IPR002883; CBD_5.
InterPro; IPR000805; Glyco_hydro_26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Evidence that the Piromyces gene family encoding endo-1,4-mannanases arose through gene duplication.";
FEMS Microbiol Lett. 141:183-188(1996).
-1- CATALYTIC ACTIVITY: Random hydrolysis of 1,4-beta-D-mannosidic
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SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND XYNA; AND TO THOSE OF N.PATRICIARUM XYNA.
-I- SIMILARITY: BELONGS TO FAMILY 26 OF GLYCOSYL HYDROLASES.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                CFSIPLGYPC
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                                                                                                                                                                                                                                                 MW.
                                                                                                                                                             Score 42; DB 1
Pred. No. 4.3;
1; Mismatches
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POLY-ASN.
B13E44581FAA9DAA CRC64;
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                 PRT;
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RA White O., Alonso J., Altafi H., Araujo R., Bowman C.L., Brooks S.Y.,
RA Buehler E., Chan A., Chao Q., Chen H., Cheuk R.F., Chin C.W.,
RA Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K.,
RA Chung M.K., Conn L., Conway A.B., Conway A.R., Creasy T.H., Dewar K.,
RA Gill J.E., Goldsmith A.D., Haas B., Hansen N.F., Hughes B., Hulzar L.,
RA Hunter J.L., Jenkins J., Johnson-Hopson C., Khan S., Khaykin E.,
RA Kim C.J., Koo H.L., Kremenetskaia I., Kurtz D.B., Kwan A., Lam B.,
RA Kim C.J., Koo H.L., Kremenetskaia I., Kurtz D.B., Kwan A., Lam B.,
RA Langin-Hooper S., Lee A., Lee J.M., Lenz C.A., Li J.H., Li Y.-P.,
RA Militscher J., Miranda M., Nguyen M., Nierman W.C., Osborne B.I.,
RA Pai G., Peterson J., Pham P.K., Rizzo M., Rooney T., Rowley D.,
RA Sun H., Tallon L.J., Tambunga G., Toriumi M.J., Town C.D.,
RA Sun H., Tallon L.J., Tambunga G., Toriumi M.J., Town C.D.,
RA Wu D., Yu G., Fraser C.M., Venter J.C., Davis R.W.,
                                                                              Matches
                                                                                            Query Match
Best Local
                                                                                                                                                               BINDING
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- CATALYTIC ACTIVITY: Inosine 5'-phosphate + NAD(+) + H(2)0 xanthosine 5'-phosphate + NADH.
-!- PATHWAY: FIRST REACTION UNIQUE TO GMP BIOSYNTHESIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dehydrogenase) (IMPDH) (IMPD).
AT1G16350 OR F309.15.
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16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Probable inosine-5'-monophosphate dehydrogenase (EC 1.1.1.205) (IMP
                                                                                                                                                                                                                                                                                          InterPro; IPR000644; CBS.
InterPro; IPR003009; FMN_enzyme.
InterPro; IPR001093; IMP_DH_GMP_RED.
Pfam; PF00571; CBS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eueurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                              Pfam; PF01574; IMPDH_N; 1.
PROSITE; PS00487; IMP_DH_G
                                                                                                                                                                                                                                                                              Pfam; PF00478; IMPDH_C; 1
                                                                                                                                                                                                                                                                                                                                                             EMBL; AC006341; AAD34687.1; HSSP; P12268; 1B30.
                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: CONTAINS 1 CBS DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nature 408:816-820(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=CV. COLUMBIA;
MEDLINE=21016719; PubMed=11130712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana (Mouse-ear cress).
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                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                               CBS domain.
                                                                                                                                                                                                                              Oxidoreductase; NAD; GMP biosynthesis; Purine biosynthesis; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Sequence and analysis of chromosome 1 of the plant Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                              Local Similarity
nes 6; Conser
               49
                                          4 VPLSVPC
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             VPLSIPC
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54051 MW;
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85.7%;
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                                                                                              Score 38; DB Pred. No. 19;
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                                                                                                                                                                                  (POTENTIAL)
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                                                                                                               Length 502;
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RESULT 4
IMH1_ARATH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arabidopsis thaliana (Mouse-ear cress).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosid eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-MAR-2002 (Rel. 41, Last annotation update)
Inosine-5'-monophosphate dehydrogenase (EC 1.1.1.205)
                                                                                                                                                                                                                                 use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 408:816-820(2000).

- CATALYTIC ACTIVITY: Inosine 5'-phosphate + NAD(+) + xanthosine 5'-phosphate + NADH.

- I- PATHWAY: FIRST REACTION UNIQUE TO GMP BIOSYNTHESIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sun H., Tallon L.J., Tambunga G., Toriumi M.J., Town C.D., Utterback T., Van Aken S., Vaysberg M., Vysotskaia V.S., Walker M., Wu D., Yu G., Fraser C.K., Venter J.C., Davis R.W., "Sequence and analysis of chromosome 1 of the plant Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Collart F.R., Osipiuk J., Trent J., Olsen G.J., Huberman E.; "Cloning and characterization of the gene encoding IMP dehydrogenase from Arabidopsis thaliana."; Gene 174:217-220(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dehydrogenase) (IMPDH) (IMPD).
IMPDH OR AT1G79470 OR T8K14.11.
                 InterPro; IPR000644; CBS.
InterPro; IPR003009; FMN_enzyme.
InterPro; IPR001093; IMP_DH_GMP_RED.
Pfam; PF00571; CBS; 1.
Pfam; PF00478; IMPDH_C; 1.
Pfam; PF01574; IMPDH_N; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=CV. COLUMBIA;
MEQLINE=21016719; PubMed=11130712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=CV. COLUMBIA;
MEDLINE=97045815; PubMed=8890737;
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                                                                                                                                                   P12268;
                                                                                                                                                                     AC007202; AAD30229.1; -.
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IMP_DH_GMP_RED;
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RESULT 6
CG2A_CHLVR
ID CG2A_C
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Best Local
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P51986;
D1-oCT-1996 (Rel. 34, Created)
D1-oCT-1996 (Rel. 34, Last sequence upda
15-JUL-1999 (Rel. 38, Last annotation up
G2/mitotic-specific cyclin A (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-99120557; PubMed-9923682;
Alm R.A., Ling L.-S.L., Moir D.T., King B.L., Brown E.D., Doig P.C Smith D.R., Noonan B., Guild B.C., deJonge B.L., Carmel G., Tummino P.J., Caruso A., Uria-Nickelsen M., Mills D.M., Ives C., Gibson R., Merberg D., Mills S.D., Jiang Q., Taylor D.E., Vovis G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence up
16-OCT-2001 (Rel. 40, Last annotation
Hypothetical protein JHP0985.
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30-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oxidoreductase; NAD; GMP biosynthesis; Purine biosynthesis; Repeat; CBS domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Genomic sequence comparison of two unrelated isolates of the human gastric pathogen Helicobacter pylori.";
Nature 397:176-180(1999).
-i- SIMILARITY: BELONGS TO THE UBID FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                        InterPro; IPR002830; UPF0096.

Pfam; PF01977; UPF0096; 1.

Hypothetical protein; Complete proteome.

SEQUENCE 616 AA; 70989 MW; C219E1DCE4C8BDD5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                            use by non-profit institutions as long a modified and this statement is not removed.
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Bacteria; Proteobacteria; epsilon subdivision; Heli
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                                                                             CG2A_CHLVR
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                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (See http://www.isb-sib.ch/announce/
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54194 MW;
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85.7%;
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77.8%;
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Best Local !
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                  01-AUG-1991 (Rel. 19, Created)
01-AUG-1991 (Rel. 19, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Suffated surface glycoprotein 185 (SSG 185).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Presence and expression of G2 cyclins in the coelenterate hydra.";
J. Cell Sci. 109:1063-1069(1996).

J. Cell Sci. 109:1
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                                                                                                                                                                                              SEQUENCE FROM N.A., AND PARTIAL SEQUENCE. STRAIN-F. NAGARIENSIS / HK10; MEDLINE-90094551; pubbed-2699458; Ertl H., Mengele R., Wenzl S., Engel J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VOLCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000553; Cyclin.
Pfam; PF00134; Cyclin; 1.
Pfam; PF02984; Cyclin_C; 1.
SMART; SM00385; CYCLIN; 2.
PROSITE; PS00292; CYCLINS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                              Volvox carteri.
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
                                                                                                                                                                                                                                                                                                NCBI_TaxID=3067;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scheurlen-Blchle I., Hoffmeister S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chlorohydra viridissima (Hydra).
Eukaryota; Metazoa; Cnidaria; Hydrozoa; Hydroida; Anthomedusae;
Hydridae; Chlorohydra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=96338615;
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                                                                                                                                                                               H., Mengele R., Wenzl S., Engel extracellular matrix of Volvox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420 AA;
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                                                                                                                                                                                                                                                                                                                        Volvox.
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    CONSISTS
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carteri: molecular structure
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    ALMOST EXCLUSIVELY OF
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YHJ2_YEAST
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P38767;
01-FEB-1995 (Rel. 3
01-FEB-1995 (Rel. 3
16-OCT-2001 (Rel. 4
Hypothetical 64.2 k
              EMBL; U00062; AAB68911.1; -.
PIR; S46742; S46742.
SGD; S0001074; YHR032W.
InterPro: IPB002528; UPF0013.
Pfam; PF01554; UPF0013; 2.
Hypothetical protein; Transmembrane; Transport.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Johnston M., Andrews S., Brinkman R., Cooper J., Ding H., Dover J., Du Z., Favello A., Fulton L., Gattung S., Geisel C., Kirsten J., Kucaba T., Hillier L., Jier M., Johnston L., Langston Y., Latreille P., Louis E.J., Macri C., Mardis E., Menezes S., Mouser L., Nhan M., Rifkin L., Riles L., St Peter H., Trevaskis E., Vaughan K.,
                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                   Nhan M., Ritkin L., Niles -...
Vignati D., Wilcox L., Wohldman P.,
Hypothetical protein; TRANSMEM 173 19:
                                                                                                                                                                                          modified and this statement is not removed
                                                                                                                                                                                                              the European Bioinformatics Institute. Thuse by non-profit institutions as long
                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                                       Science 265:2077-2082(1994).
                                                                                                                                                                                                                                                                                                                                                                                                            "Complete nucleotide sequence of Saccharomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN~S288C / AB972;
MEDLINE=94378003; PubMed=8091229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saccharomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Glycoprotein; Sulfation; DOMAIN 228 340
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83 CQTVPLTEPC 92
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. 31, Last sequence 40, Last annotations.
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60.0%;
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Last annotation updat
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O THE MULTI ANTIMICROBIAL EXTRUSION (MATE)
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Waterston R., Wilson

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                                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
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                                                                                                                  50436 MW;
                                                                                                                                                                        Hydroxylation.
PRO-RICH.
Score 37;
Pred. No.
                                                                                                                                                POLY-PRO
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                           Length 485
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Mismatches

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YMA2_MYCBO
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30-MAY-2000
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MEDLINE-97474796; PubMed-9331372;

Winfield S.L., Tayebi N., Martin B.M.,

"Identification of three additional gen
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COTE1 protein.
                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                 use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                               glucocerebrosidase locus
disease.";
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 YMA2_MYCBO
                                                                                                                                   SEQUENCE
                                                                                                                                                                                                   Transmembrane
                                                                                                                                                                                                            EMBL; AF023268; AAC51822.1;
                                                                                                                                                                                                                                                                    the European Bioinformatics Institute.
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                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                             DOMAIN
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                                                CPSVPLLRPC
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5; Conser
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Similarity 70.0%;
7; Conservative
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635
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Pred. No.
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 PRT;
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 298
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56;
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01-JUN-1994 (Rel. 29, 1
16-OCT-2001 (Rel. 40, 1
Hypothetical 32.3 kDa I
Mycobacterium bovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P54841;
01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Transcription factor MAF1 (Segmentation protein KR)
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"Molecular cloning and sequencing of the gene for mycocerosic acid synthase, a novel fatty acid elongating multifunctional enzyme, from Mycobacterium tuberculosis var. bovis Bacillus Calmette-Guerin.";
J. Biol. Chem. 267:19388-19395(1992).
-i- SIMILARITY: STRONG, TO M.TUBERCULOSIS RV1521.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Actinomycetales;
NCBI_TaxID=1765;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000873; AMP-bind.
Pfam; PF00501; AMP-binding; 1.
Hypothetical protein; Transmembrane.
SEQUENCE 298 AA; 32286 MW; 22232DD5DBC6F371
                                                                                                                                                                                                                                                                zipper transcription factor.";
Cell 79:1025-1034(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MAFB OR MAF1 OR KRML.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MAF1_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                        - I - FUNCTION: MAY PLAY AN EARLY ROLE IN AXIAL PATTERNING
                                                                                                                                                                                                                                                                                                                      "The mouse segmentation gene kr encodes a novel basic
                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=95094266; PubMed=8001130;
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
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SUBCELLULAR LOCATION: Nuclear.

TISSUE SPECIFICITY: MOST ABUNDANT IN KIDNEY, GUT, LUNG, AND BRA: DEVELOPMENTAL STAGE: DETECTABLE AT 8.0 DPC (ONE SOMITE) AS A BAI IN THE CAUDAL HINDBRAIN, AND BY 8.5 DPC (SIX TO EIGHT SOMITES) THE HIGH LEVEL DOMAIN EXHIBITS A SHARP ROSTRAL EDGE CONCLIDENT WITH THE R4/R5 BOUNDARY AND A DIFFUSE CAUDAL EDGE LOCATED MIDWAY THROUGH R6.
                                                                                                                                                                                                             SEGMENTATION)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IAVPLSVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 87.17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; I Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62.5%;
87.5%;
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Last annotation update)
protein in MAS 5'region.
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Pred. No. 38;
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                                    A DIFFUSE CAUDAL EDGE LOCATED MIDWAY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Kreisler).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                domain-leucine
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                                                                                                                        AS A BAND
                                                                                                                                                      AND BRAIN
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Best Local (
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         EMBL; U56241; AAB50062.1; -. HSSP; P05412; 1JUN. Interpro; IPR001871; bZIP. Pfam; PF03131; bZIP_Maf; 1.
                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                  Oncogene 14:745-750(1997).
-!- SUBCELLULAR LOCATION: Nuclear.
-!- SIMILARITY: BELONGS TO THE BZIP FAMILY. MAF SUBFAMILY.
                                                                                                                                                                                                                                                                  STRAIN-WISTAR; TISSUE-Liver;
MEDLINE-97190228; PubMed-9033383;
Sakai M., Imaki J., Yoshida K., Ogata A., Ma
Kuboki Y., Nishizawa M., Nishi S.;
"Rat maf related genes: specific expression
                                                                                                                                                                                                                                                            spinal cord.";
                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P54842;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001871; bZIP. Pfam; PF03131; bZIP_Maf; 1. SMART; SM00338; BRLZ; 1.
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                             MAFB OR MAF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transcription factor MAF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAF1_RAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Transcription regulation; DNA-binding; Nuclear protein.

DOMAIN 131 143 POLY-HIS.

DOMAIN 158 167 POLY-HIS.

DOMAIN 258 264 BASIC MOTIF.

DOMAIN 266 287 LEUCINE-ZIPPER.

MUTAGEN 248 248 N->S: LOSS OF TRANSCRIPTIO
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HSSP; P05412;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SVPLSVPC 10
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MGI:104555; Mafb.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 323
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75.0%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LEUCINE-ZIPPER.
N->S: LOSS OF TRANSCRIPTIONAL ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D77AE07ABD9C2AD2 CRC64;
                                                                                                                                                                                                                                                                                                   Ogata A., Matsushima-Hibaya Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 323
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RESULT 14
FD21_M
FD21_M
ID FD21_M
AC 050441
DT 16-0CT
DT 16-0CT
DT 16-0CT
DE Putati
DE Synthe
GN FADD21
OS Mycobe
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Best Local Similarity
Watches 5; Conserv
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V181_F
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                                                   O50441;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Putative fatty-acid--CoA ligase fadD21 (EC 6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-OCT-2001 (Rel. 6
16-OCT-2001 (Rel. 6
16-OCT-2001 (Rel. 6
Protein FPV181.
                 synthetase). FADD21 OR RV1185C OR MT1222 OR MTV005.21C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FOWPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF198100; AAF44525.1; -INTERPO; IPR004251; DUF230. Pfam; PF03003; DUF230; 1. SEQUENCE 369 AA; 42081 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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DNA_BIND
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transcription
DOMAIN 13
DOMAIN 15
                                                                                                                                                                              FD21_MYCTU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. The second of the s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Afonso C.L., Tulman E.R., Lu Z., "The genome of fowlpox virus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Avipoxvirus.
NCBI_TaxID=10261;
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Q9J552;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SIMILARITY: BELONGS TO THE POXVIRUSES A16 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=20193820; PubMed=10729156;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fowlpox virus (FPV).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FPV181
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                                                                                                                                                                                                                                                                                       164 CLQTPGSLPC 173
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323
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158
194
238
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131 143
158 167
194 201
238 264
238 264
266 287
23 AA; 35792
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                                                                                                                                                                              STANDARD;
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40, Last sequ
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50.0%;
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75.0%;
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Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    no RNA stage; Poxviridae; Chordopoxvirinae;
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POLY-HIS.
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                                                                                                                                                                                                                                                                                                                                                                                            Score 35;
Pred. No.
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POLY-ALA.
BASIC MOTIF.
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Pred.
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                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380A71032C18BB99 CRC64
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                                                                                                                                                                       578 AA
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                                                            .2.1.-) (Acyl-CoA
                                                                                                                                                                                                                                                                                                                                                                                                              Length 369;
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RESULT 15
FD21_MYCLE
ID FD21_M
AC p54200
DT 01-OCT
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DE Putati
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OS Mycoba
OC Bacter
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                                                                                                 PD21_MYCLE STANDARD; PRT; 579 AA. PS4200; 09CC61; 01-0CT-1996 (Rel. 34, Created) 16-0CT-2001 (Rel. 40, Last sequence update) 16-0CT-2001 (Rel. 40, Last annotation update) 16-0CT-2001 (Rel. 40, Last annotation update) Putative fatty-acid--CoA ligase fadD21 (EC 6.2.
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Nature 393:537-544(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR000873; AMP-bind.
Pfam; PF00501; AMP-binding; 1.
PROSITE; PS00455; AMP_BINDING; FALSE_NEG.
Hypothetical protein; Ligase; Fatty acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          laboratory strains.";
Submitted (APR-2001)
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STRAIN-CDC 1551 / Oshkosh;
Mycobacterium leprae. Bacteria; Firmicutes;
                                                              FADD21 OR MASC OR ML1234.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Complete proteome
SEQUENCE 578 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AE006999; AAK45479.1; TIGR; MT1222;
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Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium.
NCBI_TaxID=1773;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ISVPLSVP 9
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tory strains.";
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87.5%;
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   Actinobacteria;
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Pred. No. 72;
1; Mismatches
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   Actinobacteridae
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Cole S.T., Eiglmeier K., Parkhill J., James K.D., Thomson N.R.,
Wheeler P.R., Honore N., Garnier T., Churcher C., Harris D.,
Mungall K., Basham D., Brown D., Chillingworth T., Connor R.,
Davies R.M., Devlin K., Duthoy S., Feltwell T., Fraser A., Hamlin N.,
Holroyd S., Hornsby T., Jagels K., Lacroix C., Maclean J., Moule S.,
Murphy L., Oliver K., Quail M.A., Rajandream M.A., Rutherford K.M.,
Rutter S., Seeger K., Simon S., Simmonds M., Skelton J., Squares R.,
Squares S., Stevens K., Taylor K., Whitehead S., Woodward J.R.,
Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U00010; AAA17075.1; ALT_FRAME. EMBL; AL583921; CAC31615.1; -. Leproma; ML1234; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00455; AMP_BINDING; FALSE_NEG.
Hypothetical protein; Ligase; Fatty acid metabolism;
                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00501; AMP-binding; 1. PROSITE; PS00455; AMP_BINDING;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between the Swiss Institute of Bioinf
the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- CAUTION: REF.1 SEQUENCE DIFFERS FROM THAT SHOWN DUE TO SEVERAL FRAMESHIFTS IN THE C-TERMINUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Massive gene decay in the leprosy bacillus."; Nature 409:1007-1011(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (MAR-1994)
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Smith D.R., Robison K.;
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NCBI_TaxID=1769;
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88
                                                                                                                                  Local Similarity les 7; Conserv
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IAVPLSVP 95
                                                               ISVPLSVP 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR000873; AMP-bind.
                                                                                                                                                                                                                                                                                                           579 AA;
                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                       63102 MW;
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                                                                                                                                                                                          Score 35;
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result	Score	Query Match	Length	DB	Ħ	Description
1	40	71.4	109	2	Q9L4Y0	Q914y0 streptomyce
2	39	69.6	85	2	Q9S556	Q9s556 pseudomonas
w	39	69.6	85	16	Q9S564	Q9s564 pseudomonas
4	39	69.6	148	16	Q9PBM2	
<sub>U</sub>	39	69.6	620	12	Q89893	
6	37	66.1	98	9	Q9MC88	Q9mc88 bacteriopha
7	37	66.1	89	16	Q9P9Y4	Q9p9y4 xylella fas
8	37	66.1	284	16	Q92RN5	Q92rn5 rhizobium m
9	37	66.1	316	Ŋ	Q9V743	Q9v743 drosophila
10	37	66.1	355	10	Q9LGY9	Q9lqy9 oryza sativ
11	37	66.1	370	ъ	Q9VA44	Q9va44 drosophila
12	37	66.1	501	10	Q9AY75	Q9ay75 oryza sativ
13	37	66.1	725	5	_	Q9n8vl trypanosoma
14	36	64.3	112	4	014634	014634 homo sapien
15	36	64.3	134	11	Q63318	
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Q9TSZ3	Q9Z955	083702	P71495	P96290	Q9CD79	Q9N3R5	Q9RVC4	P93452	Q9нхJ9	Q9K469	Q9H1F1	Q9Y5Q3	Q9FFV5	057342	042290	Q9BZI6	Q9BZI5	Q9NB94	Q9BZI4	Q9YG98	Q98UH3	Q9ASK9	Q9BR66	Q9FX29	9AMH6	Q94JK8	Q9RX44	Q9NF93
canis famil	chlamydia	083702 treponema p	=		Q9cd79 mycobacteri	Q9n3r5 caenorhabdi	Q9rvc4 deinococcus		w	stre		5		coturn	gal]			anop	homo sapien	Q9yg98 aeropyrum p	xenop	Q9ask9 oryza sativ	⇉		pseud		4	Q9nf93 leishmania

### ALIGNMENTS

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RESULT 2
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Q9L4Y0;
Q9L6Y0;
Q1-OCT-2000 (TrembLrel. 15, C
Q1-OCT-2000 (TrembLrel. 15, L
Q1-DEC-2001 (TrembLrel. 19, L
TCM_F1 MONOOXYGENASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-TU 2353;

MEDLINE=21225632; PubMed=11325225;

Rafanan E.R. Jr., Le L., Zhao L., Decker H., Shen B.;

Rafanan E.R. Jr., Le L., Zhao L., Decker H., Shen B.;

"Cloning, sequencing, and heterologous expression of the elmGHIJ genes involved in the biosynthesis of the polyketide antibiotic elloramycin from Streptomyces olivaceus Tu2353.";

J. Nat. Prod. 64:444-449(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Monooxygenase.
SEQUENCE 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Firmicutes; Actinobacteria; Actinobacteridae; Actinomycetales; Streptomycineae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF263463; AAF73051.1;
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                                                                                                                                                                                                                           2 ISVPLSVPC 10
                                                                                                                                                                                  IATPLSVPC 98
                                                                                                                                                                                                                                                                                                                    Similarity 7; Conserv
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                                                                                                                                                                                                                                                                                                                           Conservative
   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12304 MW;
                                                                                                                                                                                                                                                                                                                                                         71.48;
77.88;
                                                                                                                                                                                                                                                                                                                    Score 40; DB
Pred. No. 4.3;
1; Mismatches
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Last annotation update)
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   PRT;
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4.3;
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                                                                                                                                                                                                                                                                                                                                                                                          Length 109;
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RESULT
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Q9S564;
Q1-MAY-2000 (TrEMBLrel. 13, Cr
101-MAY-2000 (TrEMBLrel. 13, Lr
101-DEC-2001 (TrEMBLrel. 19, Lr
101-DEC-2001 (TrEMBLrel. 19, Lr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                            MEDLINE=20437337; PubMed=10984043;
Stover C.K., Pham X.-Q.T., Erwin A.L., Mizoguchi S.D., Warrener P. Hickey M.J., Brinkman F.S.L., Huffnagle W.O., Kowalik D.J., Lagrou Garber R.L., Goltry L., Tolentino E., Westbrock-Wadman S., Yuan Y. Brody L.L., Coulter S.N., Folger K.R., Kas A., Larbig K., Lim R.M. Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T., Reizer J., Saier M.H., Hancock R.E.W., Lory S., Olson M.V.;
                                                                                                                                                                                                                                                                                                                                             Nakayama K., Takashima K., Ishihara H., Shi
Kanaya S., Ohnishi M., Murata T., Mori H.,
"The R-type pyochn is related to P2 phage,
related to lambda phage.";
Submitted (JUN-2000) to the EMBL/GenBank/DD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-ATCC 15692 / PAO1;
Nakayama K., Takashina K., Ishihara H., Shinomiya T., Kageyama M.,
Kanaya S., Ohnishi M., Murata T., Terawaki Y., Mori H., Hayashi T.
"Genetic relationship between bacteriocins and bacteriophages.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09S556;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation updat-
HYPOTHETICAL 9.3 KDA PROTEIN.
"Complete genome sequence of Pseudomonas aeruginosa PAO1, opportunistic pathogen.";
Nature 406:959-964(2000).
                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN-ATCC 15692 / PAO1;
MEDLINE-20437337; PubMed-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-SLM6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nakayama K., Takashima K., Ishihara H., Shinomiya T., Kageyama M., Kanaya S., Ohnishi M., Murata T., Mori H., Hayashi T.; "The R-type pyocin of Pseudomonas aeruginosa is related to P2 phage, and the F-type is related to lambda phage."; Mol. Microbiol. 38:213-231(2000).

EMBL, AB030826; BAA83139.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypothetical
SEQUENCE 85
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Bacteria; Proteobacteria;
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H., Hayashi
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RX MEDLINE-20365717; PubMed-10910347;

RA Alvarenga R., Alves L.M.C., Arraya J.E., Baia G.S., Baptista C.S., RA Alvarenga R., Alves L.M.C., Arraya J.E., Baia G.S., Baptista C.S., RA Bairos M.H., Bonaccorsi E.D., Bordin S., Bove J.M., Briones M.R.S., RA Bueno M.R.P., Camaryo A.A., Camaryo L.E., Costa F.F., Costa M.C.R., Costa F.R., Costa M.C.R., Costa F.R., Costa M.C.R., Costa F.R., Costa M.C.R., Comes S.L., Gruber A., RA Krieger J.S., Kuramaa E.E., Laigretr F., Lambais M.R., Leite L.C.C., RA Krieger J.E., Kuramaa E.E., Laigretr F., Lambais M.R., Machado J.A., Machado M.A., Madeira M.M.F., Machado J.A., Machado M.A., Machada M.M.F., Machado J.A., Machado M.A., Machado M.R., Machado M.A., Machado M.R., Machado J.A., Martins E.M.F., Matsukuma A.Y., RA Manok C.F.M., Miracca E.C., Mayaki C.Y., Monteiro-Vitorello C.B., RA Manok C.F.M., Marins E.A.L., Martins E.M.F., Matsukuma A.Y., RA Menck C.F.M., Machado J.R., Natura M.A., Pereira M.A., Machado J.R., Pereira G.A.G., Pereira H.A. Jr., Pesquero J.B., RA Machado M.R., Machado M.R., Machado M.H., Machado M.R., Machado M.H., Machado M.R., Machado M.R., Machado M.R., Machado M.R., Machado J.C., Santelli R.V., Sawasaki H.E., de Souza A.A., Machado M.R., Machado M.R., Machado J.C., Santelli R.V., Sawasaki H.E., Machado M.R., Machado M.R., Machado J.C., Machado M.R., Machado J
                                                      Query Match
Best Local
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EMBL; AB045308; BAA97449.1; -.
EMBL; AE004498; AAAG04020.1; -.
Hypothetical protein; Complete proteome.
Hypothetical protein; Complete Proteome.
SEQUENCE 85 AA; 9222 MW; F2267D9C542C7F48 CRC64;
                                                                                                                              Hypothetical SEQUENCE 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q89893
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chang C.K., Balachandran N.;
"Identification, characterization, encoding a phosphoprotein of human J. Virol. 65:2884-2894(1991).
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                                                                                                                                                                                                                                                                  Martin M.E., Nicholas J., Thomson B.J., Newman C., Honess R.W.; "Identification of a transactivating function mapping to the puinmediate-early locus of human herpesvirus 6.";
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"Characterization of the DNA polymerase gene
J. Virol. 65:4670-4680(1991).
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                                                 "Identification of homologues to the human family in human herpesvirus 6.";
J. Gen. Virol. 73:1661-1671(1992).
                                                                                                                         Efstathiou S., Lawrence G.L.,
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Alvarenga R., Alves L.M.C., Araya J.E., Baia G.S., Baptista C.S.,
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A Menck C.F.M., Miracca E.C., Miyaki C.Y., Monteiro-Vitorello C.B.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Viruses; dsDNA viruses,
Lambda phage group.
NCBI_TaxID=31535;
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"Sequence of the Genome of the Temperate,
"and the Temperate,"
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REDLINE-21368234; PubMed-11474104;

REGALIDE-ETF., Finan T.M., Long S.R., Puehler A., Abola P., Ampe F.,

RA Barloy-Hubler F., Barnett M.J., Becker A., Boistard P., Bothe G.,

RA Boutry M., Bowser L., Buhrmester J., Cadieu E., Capela D., Chain P.,

RA Cowie A., Davis R.W., Dreano S., Federspiel N.A., Fisher R.F.,

RA Cowie A., Davis R.W., Dreano S., Federspiel N.A., Fisher R.F.,

RA Gloux S., Godrie T., Goffeau A., Golding B., Gouzy J., Gurjal M.,

RA Hernandez-Lucas I., Hong A., Huizar L., Hyman R.W., Jones T., Kahn D.,

RA Hernandez-Lucas I., Keating D.H., Kiss E., Komp C., Lelaure V.,

RA Masuy D., Palm C., Peck M.C., Pohl T.M., Portetelle D., Purnelle B.,

RA Masuy D., Palm C., Peck M.C., Pohl T.M., Portetelle D., Purnelle B.,

RA Ramsperger U., Surzycki R., Thebault P., Vandenbol M.,

Vorhoelter F.J., Weidner S., Wells D.H., Wong K., Yeh K.-C., Batut J.;

"The composite genome of the legume symbiont Sinorhizobium meliloti.";

Science 293:668-672(2001).

REL SCHENCE 293:668-672(2001).
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Best Local S
Matches 5
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01-DEC-2001 (TrEMBLrel. 19, Created)
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01-DEC-2001 (TrEMBLrel. 19, Last annotation
PUTATIVE TRANSCRIPTION REGULATOR PROTEIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rhizobium meliloti (Sinorhizobium meliloti).
Bacteria; Proteobacteria; alpha subdivision; Rhizobiaceae group;
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"The genome sequence of Drosophila melanogaster.";

EMBL; AEO03813; AAF582221; -
DR ENBL; AEO3313; AAF582221. -
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Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.
Durbin K.J., Evangelista C.C., Ferraz C., Ferrara S., Fleischmann W.
Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
                                                                                                            O9LGY9
O9LGY9; PRELIMINARY;
O1-OCT-2000 (TrEMBLrel. 15,
O1-OCT-2000 (TrEMBLrel. 15,
O1-DEC-2001 (TrEMBLrel. 19,
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Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Barandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
Oryza sativa (Rice).

Gukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster (Fruit fly).
Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Inse
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                             HYPOTHETICAL PROTEIN.
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Best Local Similarity
Thes 5; Conserv
RX MEDLING-20196006; PubMed-10731132;
RX Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Adams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Man K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Botshakov S.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Georgy J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Georgy J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA George R.A., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA George F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Hernandez J., Katchum K.A.,
RA Kinmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
Lin X.,
RA Mullians S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Hostin M., Siden Kiamos I., Sinpson M., Skupski M.P., Smith T.,
RA Hollians S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
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Dusaphila melanogaster (Fruit fly).

Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;

Ephydroidea; Drosophilidae; Drosophila.
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01-MAY-2000 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-CV.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID-4530;
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Last annotation update)
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Pred. No.
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Conservative

Pred. No.

Mismatches

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Gaps

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Matches 5
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Best Local S
Matches 5
                                                                         Interpro; IPR0000644; CBS.
Interpro; IPR003009; FMN_enzyme.
Interpro; IPR001093; IMPDH_GMP_RED.
Pfam; PF00478; IMPDH_C; 1.
Pfam; PF01574; IMPDH_N; 1.
SMART; SM00116; CBS; 1.
PROSITE; PS00487; IMPDH_GMP_RED; 1.
SEQUENCE 501 AA; 52655 MW; DDE295
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Q9AY75;
Q9AY75;
Q1-JUN-2001 (TrembLrel. 17, Created)
Q1-JUN-2001 (TrembLrel. 17, Last sequence update)
Q1-DEC-2001 (TrembLrel. 19, Last annotation update)
Q1-DEC-2001 (TrembLrel. 19, Last annotation update)
Q1-DEC-2001 (TrembLrel. 19, Last annotation update)
                                                                                                                                                                                                                    Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases EMBL; AC084320; AAK09225.1; -.
                                                                                                                                                                                                                                                Buell C.R., Yuan Q., Moffat K.S., Hill J.N., Burr P.C., Hsiao J., Zismann V., Pai G., Bowman C.L., Fujii C.Y., VanAken S.E., Bowman C.L., Craven B., Utterback T.R., Khalak H., Feldblyum T.V. Quackenbush J., White Q., Salzberg S.L., Fraser C.M.; Quackenbush J., White O., Salzberg S.L., Fraser C.M.; "Oryza sativa chromosome 3 BAC OSJNBa0091J19 genomic sequence.";
                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; TYYP_SPC; 1.
PROSITE; PS50240; TRYPSIN_DOM;
PROSITE; PS00134; TRYPSIN_HIS;
PROSITE; PS00135; TRYPSIN_SER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FlyBase; FBgn0039798; CG11313.
InterPro; IPR001314; Chymotrypsin.
InterPro; IPR001254; Trypsin.
Pfam; PF00089; trypsin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.; "The genome sequence of Drosophila melanogaster."; Science 287:2185-2195(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           OSJNBA0091J19.1
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HSSP; P00763; 11
                                                                                                                                                                                                                                                                                                                                STRAIN-CV. NIPPONBARE;
                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=4530;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryza sativa (Rice).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hydrolase;
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                                                                                                                                                                                                       HSSP; P12268; 1B30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
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nes 5; Conser
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55.6%;
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                              Score 37;
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                                                                               DDE295CB714C3802 CRC64;
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                              DB 10; Length 501;
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RC TISSUE
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InterPro; IPRO03960; AAA_sub.
InterPro; IPRO03959; AAA_subfam.
Pfam; PF00004; AAA; 2.
SMARY; SM00382; AAA; 1.
PROSITE; PS00674; AAA; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09N8V1;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
POSSIBLE N'ETHYLMALEIMIDE SENSITIVE FUSION PROTEIN.
                                                                          Zhao X.P., Elder J.T.;
"Positional cloning of novel skin-specific genes from the human epidermal differentiation complex.";
Genomics 45:250-258(1997).

EMBL; AF005081; AAB83961.1; -.
InterPro; IFR000561; EGF-1ike.
PROSITE; PS00022; EGF-1; UNKNOWN_1.
                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                            01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
SKIN-SPECIFIC PROTEIN (FRAGMENT).
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725 AA;
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                                                                                                                                                                                   MEDLINE=98008911; PubMed=9344646;
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                                                          SEQUENCE
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                                                          112 AA;
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                                                          11329 MW; 96826DC3E7362E6B CRC64;
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60.0%;
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50.0%;
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EMBL; M30690; AAA41547.1; -
EMBL; M30691; AAA41548.1; -
HSSP; P01468; 1CXN.
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MEDLINE=90152758; PubMed=2154400;
Mrichans S., Palfree R.G.E., Sirlin S., Ha
"Analysis of three distinct Ly6-A-related rat kidney.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; F
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003632; Ly-6_CD59.
InterPro; IPR001526; LY6_UPAR.
Pfam; PF00021; UPAR_LY6; 1.
ProDom; PD003128; Ly-6_CD59; 1.
SMARR; SM00134; LU; 1.
SEQUENCE 134 AA; 14157 MW;
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Pred. No. 28;
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43.5
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2. /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1981.DAT: *
3. /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1981.DAT: *
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25. /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1999.DAT: *
26. /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1999.DAT: *
27. /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1999.DAT: *
                                                                                                                                                                                                                                                                                                                                                                  Query
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4.886 Million cell updates/sec
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Copyright (c) 1993 - 2000 Compugen Ltd
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AAU04533
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AAM95534
                                                                                                                                                                                                                           AAU04532
AAU04526
AAR66394
                                    AAM95827
AAU04543
           ABG12530
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VEGF based monocyc
VEGF based monocyc
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                                                                                                                                                                                            VEGF based monocyc
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VEGF based monocyc
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36	599	8	515	9	496	2931	AAY87243	ABG11773	AAM80011	$\sim$	2	9	ABG19452	AAB45462	5	91	AAB45460	54	84	5	22	6	2	56	189	49	504	31	2098	880	AAM16003	20	ABG12542
Human bone marrow	brain	ein #25	#2665 e	Human secreted pro	Human secreted pro	PRO pol	n signal		Human protein SEQ	protein s	_	Propionibacterium	O	Human secreted pro	secreted	secreted	secreted	Human secreted pro	۳.	bac	,	ease sul	Novel human diagno	မွ	Novel human diagno	D	c		thal	opsis tha	37	06 е	Novel human diagno

## ALIGNMENTS

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RESULT
AAU04532
                                                                          Human; VEGF; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                      AAU04532 standard; Peptide;
Achen MG, Hughes RA, Stacker S,
                                                                                                                                                                               Disulfide-bond
                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                          VEGF based monocyclic peptide 10.
                                                                                                                                                                                                                                                                                                                                                               AAU04532;
                         (LUDW-) LUDWIG INST CANCER RES.
                                                 18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
                                                                                      18-JAN-2001; 2001WO-US01533
                                                                                                                26-JUL-2001.
                                                                                                                                         WO200152875-A1.
                                                                                                                                                                                                                                                                                                                                     26-SEP-2001 (first entry)
                                                                                                                                                                                        Location/Qualifiers
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Cendron
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2001-442248/47.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psociasis, arthropathy, heat or creebrovascular accident, post-angiophasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive beneficially and accident diagraphic allocations of the liver, excessive
                                                                                                                                                                                                                                                                                                                                            neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VEGF based monocyclic peptide 3.
26-JUL-2001
                                                              WC200152875-A1
                                                                                                                                                              Disulfide-bond
                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                       Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU04526 standard; Peptide; 11 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequence represents a monomeric monocyclic peptide of the invention,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
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                                                                                                                                                                                                                                                                                                              retinopathy; chronic inflammation; cyclic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 56; Differity 100.0%; Pred. No. 0.0 Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                 Location/Qualifiers
                                                                                                                   /note= "This bond cyclises the peptide"
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0.0045;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neovascularisation or lymphangiogenesis in a mammal with a condition of characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, combination or is diabetic retinopathy, psoriasis, arthropathy, combination is diabetic retinopathy, psoriasis, arthropathy.

CC hemangioma, vascularised malignant or benign tumour, post-recovery combination, substance-induced malignant or benign tumour, post-recovery combined to reduce the constant of the liver, excessive hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver combination. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid combination in peripheral limbs or in lungs, peritoneal cavity, pleura, cor brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere cuits at least one biological activity induced by VEGF, VEGF-C or D and combination with an anti-inflammatory agent, to treat a combinity retirements.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
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                                                                                                                                                                                                                                 11-AUG-1995 (first entry)
                                                                                           Psychosis protecting peptide
                                                                                                                                                                Human psychosis protecting peptide encoded by reading
                                                                                                                                                                                                                                                                                                                                                                            AAR66394 standard; Peptide; 141 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oxidizing the cysteine residues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diabetic retinopathy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Achen MG, Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (LUDW-) LUDWIG INST CANCER RES
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16-MAY-2000; 2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81.2%;
90.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 45.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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.26;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
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RESULT
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Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Psychosis protecting peptide (PP peptide) can be obtd. intitially by using the sequence in AAQ75090 as a basis for designing polynucleotide probes to clone, sequence and express or synthesize PP related protein and peptides occurring in normal individuals, and to a substantially lesser degree in individuals with psychotic disorders. The PP encoding gene was discovered using the subtraction cloning of cDNA from mRNA obtd. from monozygotic twins discordant for schizophrenia and assaying for clones in which expression is greatest in the 'well' twin. A nt sequence substantially corresp. to AAQ75090 is claimed, which comprises 30-X nts, where X=80, 95, 158, 222, 243, 249, 260, 295, 407 or 423. A PP peptide of 10-141 AAs is also claimed.
                                                                                                            neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                              VEGF
                                                                                                                                                                                                                                                        AAU04542 standard; Peptide; 11 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New nucleic acids encoding psychosis protecting peptide antibodies - for the treatment, diagnosis and research psychotic disorders, such as schizophrenia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Basham
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                                                   Disulfide-bond
                                                                                       Synthetic
                                                                                                                                                    Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                       26-SEP-2001
                                                                                                                                                                                                                                AAU04542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-MAY-1994;
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nes 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                          141 AA;
                                                                                                                                                                             monocyclic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Friedhoff AJ,
                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                     (first entry)
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1..141
                                    /note= "This bond cyclises the peptide"
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                                                                                                                                                                                                                                                                                                                                                                                       80.4%;
77.8%;
                                                                                                                                                                            peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Miller JC;
                                                                                                                                                                                                                                                                                                                                                                                      Score 45;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                  BB
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                                                                                                                                                                                                                                                                                                                                                                                                   Length 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or synthesize
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26-SEP-2001

(first

entry)

AAU04533 standard; Peptide;

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VEGF based monocyclic peptide 11.

neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; Human; VEGF; vascular endothelial growth factor; angiogenesis;

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                                                                                                                                                                                                                                                                                                                          CC beta-beta carbon separation distances on opposite antiparallel strands of carbon separation distances on opposite antiparallel strands of carbon separation distances on opposite antiparallel strands of composity the peptide by oxidising the cysteine residues. The comocyclic peptides, dimeric blcyclic peptides (comprising 2 linked comonocyclic peptides) and a cyclic peptide with at least one amino acid comocyclic peptides) and a cyclic peptide with at least one amino acid comocyclic peptides) and a cyclic peptide with at least one amino acid comocyclic peptides in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, companyioma, vascularised malignant or benign tumour, post-recovery companyioma, vascularised neovascularisation of the liver, excessive commone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver companyioma, the peptides are also used to modulate vascular permeability in amammal (the mammal has a condition characterised by fluid companyioma. The peptides are used to modulate vascular permeability carbonic infection. The peptides are used to modulate vascular permeability carbonic train. The peptides are used to interfere companyional permeability pleura, companyional permeability pleura,
AAU04533
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Best Local :
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whose 3-dimensional structure is modelled on the expose loop of human
VEGFD (vascular endothelial growth factor). The invention relates to
method of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a loop fragment from an exposed loop of a growth factor protein b
                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                          diabetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oxidizing the cysteine residues
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                                                                                                                        1 CISVPL-SVPC 10
                                                                                                 1 clsvpltsvpc 11
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                                                                                                                                                                                               Similarity
9; Conserv
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2000US-0204590.
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                                                                                                                                                                                                                      Score 43.5; DB Pred. No. 0.55;
                                                                                                                                                                                               Mismatches
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of human
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by
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AAU04545
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with anglogenesis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
AAU04545 standard; Peptide; 11
                                                                                                                                                                                                                                                                          Sequence
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                                                                                                                                                                                                                                                                                                                                  chronic inflammation, especially rheumatoid arthritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neovascularisation or lymphangiogenesis in a mammal with a condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 49; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-442248/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JAN-2000; 2000US-0176293
16-MAY-2000; 2000US-0204590
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                                                                                                                                                                             Local Similarity nes 9; Conser
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                                                                                                                                         ب
                                                                                                                                     CISVPLSVPC 10
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                                                                                                                                                                                             74.18;
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                                                                                                                                                                                             Score 41.5; DB 2:
Pred. No. 6.4e+05
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deleted prior to cyclisation are used to interfere with angiogenesis, concavascularisation or lymphangiogenesis in a mammal with a condition oc characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, chemangioma, vascularised malignant or benign tumour, post-recovery contents, substance-induced neovascularisation of the liver, excessive chromone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver confection. The peptides are also used to modulate vascular permeability care mammal (the mammal has a condition characterised by fluid caccumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic cor brain. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and care also used in combination with an anti-inflammatory agent, to treat a chronic inflammatory agent, to treat a clibabit crefit of the service of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-beta carbon separation distances on opposite antiparallel strands a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
                                                   diabetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequence represents a monomeric monocyclic peptide of the invention
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2000US-0204590.
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                                                                                                                                                                                                                                                                                                                                                                              or cold
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Query Match Best Local Similarity

74.18; 72.78;

Score Pred.

41.5; No. 1

DB 22;

Length 11;

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beta-beta carbon separation distances on opposite antiparallel strands of CC a peptide loop fragment from an exposed loop of a growth factor protein cand cyclising the peptide by oxidising the cysteine residues. The CC and cyclic peptides, dimeric bicyclic peptides (comprising 2 linked cc monocyclic peptides) and a cyclic peptide with at least one amino acid CC deleted prior to cyclisation are used to interfere with angiogenesis, concovascularisation or lymphangiogenesis in a mammal with a condition cc characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy. CC hemangioma, vascularised malignant or benign tumour, post-recovery creamonersular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive cc hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver confection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid
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accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere
                                                                                                                                                                                                                                                 The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
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16-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                            oxidizing the cysteine residues
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Query Match
Best Local Similarity
Watches 8; Conserv
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19-MAY-2000;
07-JUN-2000;
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02-MAR-2000;
16-MAR-2000;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       with at least one biological activity induced by VEGF, are also used in combination with an anti-inflammatory chronic inflammation, especially rheumatoid arthritis,
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26-JUL-2000;
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30-JUN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; reproductive system related antigen; reproductive system disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human reproductive system related antigen SEQ ID NO: 4192.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diabetic retinopathy.
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1 cislpissvpc 11
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Pred. No. 1.7;
2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22;
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psoriasis
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2000US-0229343
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2000US-023143
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2000US-0232081
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2000US-0235836
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2000US-0236370.
2000US-0236802.
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ID AAMS
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Best Local S
Matches 4
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17-NOV-2000
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17-NOV-2000;
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17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                       The present invention provides the protein and coding sequences of a number of human reproductive system related antigens. These can be us in the prevention and treatment of reproductive system disorders, including cancer. The present sequence is a protein of the invention.
                                             Human; reproductive system related antigen; reproductive system disorder;
                                                                         Human reproductive
                                                                                                  21-NOV-2001
                                                                                                                             AAM95827;
                                                                                                                                                     AAM95827
                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 11; SEQ ID NO 4192; 1297pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-465570/50.
N-PSDB; AAL01504.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Isolated nucleic acid molecule encoding a reproductive system antigen is used in preventing, treating or ameliorating a medical condition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HUMA-) HUMAN GENOME
                                                                                                                                                                                                                                                                    Local Similarity hes 4; Conserv
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2000US-025198
2000US-0256719
2000US-0251479
2000US-0251866
2000US-0251869
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2000US-0251989
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2000US-0249217
2000US-0249218
2000US-0249244
2000US-0249244
2000US-0249264
2000US-0249264
2000US-0249269
2000US-0249269
2000US-0249299
2000US-0249293
2000US-0249293
2000US-0249293
2000US-0249293
2000US-0249293
2000US-0250160
2000US-0250160
                                                                                                 (first entry)
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                                                                         system
                                                                                                                                                    Protein; 108
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                                                                      related antigen SEQ ID NO: 4485.
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Pred. No.
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22;
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31-JAN-2000
04-FEB-2000)
24-FEB-2000)
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10-MAR-2000)
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2000US-0198074.
2000US-0198123.
2000US-0209467.
2000US-0214886.
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2000US-0214886.
2000US-0215135.
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2000US - 0225266.
2000US - 0225267.
2000US - 022527.
2000US - 022547.
2000US - 0225757.
2000US - 022575.
2000US - 022575.
2000US - 022575.
2000US - 0226681.
2000US - 0226681.
2000US - 0226881.
2000US - 0227182.
2000US - 0227182.
2000US - 02279343.
2000US - 0229343.
2000US - 0239343.
2000US - 0239343.
2000US - 0239343.
2000US - 0231244.
2000US - 0231246.
2000US - 0231296.
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3-0234274

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3-0235834

3-0235834
  29-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
29-SEP-2000
20-CT-2000
02-CT-2000
03-NOV-2000
04-NOV-2000
06-NOV-2000
08-NOV-2000
09-DEC-2000
  Rosen
                                         (HUMA-) HUMAN
  CA,
    Barash SC,
                                                                                  2000US-0236327.
2000US-0236369.
2000US-0236369.
2000US-0236370.
2000US-023609.
2000US-0237039.
2000US-0237039.
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2000US-0237039.
2000US-0241786.
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2000US-0246477.
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2000US-0246610.
2000US-0246528.
2000US-0246528.
2000US-0246528.
2000US-0249210.
2000US-0249211.
                                           GENOME
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SM;

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RESULT 1
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Best Local :
                   The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a
                                                                                                                                                                                                           Novel monomeric monocyclic peptide, used to interfere with anglogenesis, or lymphangiogenesis, is produced by cyclising a loop fragment from an exposed loop of a growth factor protein between the contract of the contract o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; VEGF; vascular endothelial growth factor; anglogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
        method
                                                                                                                                        Example 25;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    (LUDW-) LUDWIG INST CANCER RES
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16-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU04543 standard; Peptide; 11 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated nucleic acid molecule encoding a reproductive system antigen
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N-PSDB; AAL01797.
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7; Conser
producing a monomeric monocyclic peptide by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancer.
                                                                                                                                                                                                                                                                                                                                                                               Hughes RA,
                                                                                                                                  Page 47; 102pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                108 AA;
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2000US-0204590.
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                                                                                                                                                                                          cysteine residues
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1..11
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77.88;
                                                                                                                                                                                                                                                                                                                                                                               Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 39; DB 22;
Pred. No. 32;
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a measuring
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neovascularisation or lymphanglogenesis in a mammal with a condition.

C characterised by angiogenesis, neovascularisation or lymphanglogenesis.

The condition is diabetic retinopathy, psoriasis, arthropathy,

c characterised by angiogenesis, neovascularisation or lymphanglogenesis.

C themangioma, vascularised malignant or benign tumour, post-recovery

C cerebrovascular accident, post-angioplasty restenosis, head, heat or cold

trauma, substance-induced neovascularisation of the liver, excessive

c hormone-related angiogenic dysfunction, diabetes induced neovascular

sequelae, hypertension induced neovascular sequelae, or chronic liver

infection. The peptides are also used to modulate vascular permeability

in a mammal (the mammal has a condition characterised by fluid

c accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura,

or brain. The peptides are used to image blood vessels and lymphatic

vasculature. The monomeric and bicyclic peptides are used to interfere

with at least one biological activity induced by VESF, VESF-C or D and

are also used in combination with an anti-inflammatory agent, to treat a

C chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
      Claim 20; SEQ
                                                            New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess
                                             biodiversity
                                                                                                                                               N-PSDB;
                                                                                                                                                                                                       Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                    31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                            30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel human diagnostic protein #12521.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABG12530 standard; Protein; 59
                                                                                                                                                                                                                                               (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                        11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
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| citipltslpc 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CISVPL-SVPC 10
                                                                                                                                             2001-639362/73.
DB; AAS76717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                    2000US-0540217
2000US-0649167
ID No 42889; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 38.5;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22;
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                                                                                 mutations
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ABG12542
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Best Local Similarity 70.1
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful in medical disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at fig. with the invention of the invention of the invention are discontinuously published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identificing averaged grown (I) is useful in constitutional technique.
                                                         New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess biodiversity -
                                                                                                                                                                                                                                                                              31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABG12542 standard; Protein; 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for identifying expressed genes. (I) is useful in gene therapy technique to restore normal activity of (II) or to treat disease states involving
                                                                                                                                                                   WPI; 2001-639362/73
                                                                                                                                                                                                    Drmanac RT,
                                                                                                                                                                                                                                                                                                                                    30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                           WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel human diagnostic protein #12533.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                N-PSDB; AAS76729.
                                                                                                                                                                                                                                       (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  food supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |||| : |||
9 cisvlvpvpc 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CISVPLSVPC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chromosome mapping; gene mapping; gene therapy; forensioupplement; medical imaging; diagnostic; genetic disorder
                                                                                                                                                                                                    Liu C,
                                                                                                                                                                                                                                                                              2000US-0540217.
2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67.9%;
                                                                                                                                                                                                      YT;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22; Length 59;
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                                                                                          mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
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Claim 20; SEQ ID No 42901; 103pp; English

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CC polypeptide (II) sequences (I) is useful as hybridisation probes, CC polyperase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques (CC to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations cresponsible for genetic disorders or other traits to assess biodiversity amino acid sequences. ABG00010-ABG30377 represent novel human CC diagnostic amino acid sequences of the invention.

CC specification, but was obtained in electronic format directly from WIPO as the polyperase of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABB20407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; gene expression; heart; microarray; vascular system; cardiovascular disease; hypertension; cardiac arrhythmia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein #2406 encoded by probe for measuring heart cell gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to isolated polynucleotide (I) and
                              Single exon nucleic acid probes for analyzing gene expression in
                                                                 WPI; 2001-488899/53
                                                                                                                                                                                                                       03-AUG-2000;
                                                                                                                                                                                                                                   26-MAY-2000;
30-JUN-2000;
                                                                                                                                                                                                                                                                       04-FEB-2000;
                                                                                                                                                                                                                                                                                                        30-JAN-2001; 2001WO-US00666
                                                                                                                                                                                                                                                                                                                                                                        WO200157274-A2
                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                           congenital heart disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB20407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB20407 standard; Protein; 71 AA
                                                                                                                                  (MOLE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity hes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |||| : |||
9 cisvlvpvpc 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CISVPLSVPC 10
                                                                                                                                    MOLECULAR DYNAMICS INC
                                                                                                 Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236459.
2000US-0236459.
2000US-0236459.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67.98;
                                                                                                  Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 38; DB
Pred. No. 25;
                                                                                                  Rank DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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RESULT :
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
The present invention relates to human single exon nucleic acid probes (SENP: see AAI10068-AAI28459). The present sequence is a peptide encoded by one such probe. The SENPs are derived from human HeLa cells. The SENPs can be used to produce a single exon microarray, which can be used for measuring human gene expression in a sample derived from human cervical epithelial cells. By measuring gene expression, the probes are therefore
                                                                                                                                                                                                                                                                                                                                     26-MAY-2000;
30-JUN-2000;
                                                                                                                Claim
                                                                                                                                           analyzing
                                                                                                                                                                                        WPI; 2001-488901/53.
                                                                                                                                                                                                                                                                                                                                                                                                  30-JAN-2001; 2001WO-US00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide #2437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and congenital heart disease.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to single exon nucleic acid probes for measuring human gene expression in a sample derived from human heart (see ABA21335-ABA41305). The present sequence is a protein encoded by one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays.
                                                                                                                                                                                                                                                  (MOLE-)
                                                                                                                                                                                                                                                                                              21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                          03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                               09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cervical cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Probe; human; microarray; gene expression; cervical epithelial cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAM16003 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51 cisvplptp 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CISVPLSVP
                                                                                                              27;
                                                                                                                                       genome-derived single exon nucleic acid probes useful
zing gene expression in human cervical epithelial cell;
                                                                                                                                                                                                                                                MOLECULAR DYNAMICS INC.
                                                                                                          SEQ ID No 20829; 487pp; English.
                                                                                                                                                                                                                   Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID No 22177; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71
                                                                                                                                                                                                                                                                            ; 2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
2000US-0226359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              encoded by probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              φ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein; 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67.9%;
77.8%;
                                                                                                                                                                                                                   Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 38;
Pred. No.
                                                                                                                                                                                                                    Rank DR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for measuring cervical gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30;
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RESULT :
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                 14-MAY-1999
14-MAY-1999
14-MAY-1999
18-MAY-1999
19-MAY-1999
20-MAY-1999
21-MAY-1999
                                                                                  30-APR-1999;
30-APR-1999;
04-MAY-1999;
05-MAY-1999;
06-MAY-1999;
06-MAY-1999;
07-MAY-1999;
11-MAY-1999;
11-MAY-1999;
                                                                                                                                                                        23-APR-1999;
23-APR-1999;
28-APR-1999;
                                                                                                                                                                                                                                                  29-MAR-1999;
01-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cervical cancer.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                    19-APR-1999;
21-APR-1999;
                                                                                                                                                                                                                       16-APR-1999;
                                                                                                                                                                                                                                  08-APR-1999;
                                                                                                                                                                                                                                           06-APR-1999;
                                                                                                                                                                                                                                                                     23-MAR-1999;
25-MAR-1999;
                                                                                                                                                                                                                                                                                          09-MAR-1999
                                                                                                                                                                                                                                                                                                  05-MAR-1999
                                                                                                                                                                                                                                                                                                                                                 06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                       termination sequence
                                                                                                                                                                                                                                                                                                                                                                                                              Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Arabidopsis thaliana protein fragment SEQ ID NO: 37006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-0CT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAG30888 standard;
                                                                                                                                                                                                                                                                                                             25-FEB-1999;
                                                                                                                                                                                                                                                                                                                               25-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                   EP1033405-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAG30888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             useful in grading and/or staging of diseases of the cervix, notably
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51 cisvplptp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity es 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CISVPLSVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                              2000EP-0301439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                 99US-0132486.
99US-0132863.
99US-0134256.
99US-0134218.
99US-0134211.
99US-0134211.
99US-0134271.
99US-0134761.
99US-0134941.
99US-0134941.
99US-0135124.
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99US-0131449.
99US-0132048.
99US-0132407.
99US-0132484.
99US-0132484.
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99US-0128714.
99US-0129845.
99US-0130077.
99US-0130449.
99US-0130510.
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99US-0123548.
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99US-0127462
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99US-0147416 99US-0147413 99US-014743 99US-014743 99US-014831 99US-014834 99US-014834 99US-0149368 99US-0149368 99US-014992 99US-014992 99US-014992 99US-015066 99US-015066 99US-015106 99US-015106 99US-015106 99US-015106 99US-015133 99US-015133 99US-015133 99US-0151378 99US-0151378 99US-0158659 99US-0158659 99US-0158659 99US-0158659 99US-0158659 99US-0158659 99US-0158659 99US-0158659 99US-0159339 99US-0159339 99US-0160767 99US-0160767 99US-0160767 99US-0160981 99US-0161406 99US-0161360 99US-0161360 99US-0161360 99US-0161360 99US-0161360 99US-0161360 99US-0161360 99US-0161360 99US-0161360 99US-0161361	9US-014720 9US-014730 9US-014719 9US-014726 9US-014730

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PR 29-OCT-1999; 9905-0162142.

Query Match
Similarity 85.79; Pred No. 2.3e=02; Length 502;
Betchook Similarity 85.79; Pred No. 2.3e=02;

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Do 1111:11

Do 49 VPLSTpc 55

Search completed: June 17, 2002, 16:02:17

Job time: 426 sec
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Result
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2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
5: /cgn2_6/ptodata/2,
6: /cgn2_6/ptodata/2,
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Sequence 143, Appl
Sequence 58, Appl
Sequence 57, Appl
Sequence 57, Appl
Sequence 57, Appl
Sequence 56, Appl
Sequence 56, Appl
Sequence 56, Appl
Sequence 61, Appl
Sequence 61, Appl
Sequence 61, Appl
Sequence 61, Appl
Sequence 62, Appl
Sequence 60, Appl
Sequence 60, Appl
Sequence 30, Appl
Sequence 54, Appl
Sequence 57, Appl
Sequence 51, Appl
Sequence 21, Appl
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Sequence 5, Appli	Sequence 5, Appli	Patent No. 5460953	Patent No. 5270178	Patent No. 5270178	Patent No. 5270178	Patent No. 5225537	Patent No. 5270178	•	Patent No. 5270178	Patent No. 5270178	Sequence 4, Appli	Sequence 2, Appli	Sequence 1, Appli	Sequence 1, Appli	Sequence 1, Appli	Sequence 1, Appli	Sequence 2, Appli

# Sequence 33, Application US/08331383 Patent No. 5605809 GENERAL INFORMATION: APPLICANT: Komoriya, Akira APPLICANT: Fackard, Beverly S. TITLE OF INVENTION: Compositions for the Detection of TITLE OF INVENTION: Proteases in Biological Samples at TITLE OF INVENTION: Thereof NUMBER OF SEQUENCES: ! in Biological Samples and Methods and Use

ALIGNMENTS

Gap	0;	uery Match 64.3%; Score 36; DB 1; Length 9; lest Local Similarity 50.0%; pred. No. 1.7e+05; fatches 4; Conservative 4; Mismatches 0; Indels
		( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )
		.08-331-383-33
		MOLECULE TRADE: nentide
		TOPOLOGY: linear
		STRANDEDNESS: single
		TYDE: amino acid
		SEQUENCE CHARACTERISTICS:
		INFORMATION FOR SEQ ID NO: 33:
		TELEFAX: 415-326-2422
		TELEPHONE: 415-326-2400
		TELECOMMUNICATION INFORMATION:
		REFERENCE/DOCKET NUMBER: 16865-1
		29,6
		NAME: Dow, Karen B.
		ATTORNEY/AGENT INFORMATION:
		CLASSIFICATION: 424
		FILING DATE: 28-OCT-1994
		APPLICATION NUMBER: US/08/331,383
		CURRENT APPLICATION DATA:
		SOFTWARE: PatentIn Release #1.0, Version #1.25
		OPERATING SYSTEM: PC-DOS/MS-DOS
		COMPUTER: IBM PC compatible
		MEDIUM TYPE: Floppy disk
		COMPUTER READABLE FORM:
		ZIP: 94105
		COUNTRY: USA
		STATE: California
		CITY: San Francisco
		STREET: One Market Plaza, Steuart Tower, Suite 2000
		ADDRESSEE: Townsend and Townsend Khourie and Crew
		CCXXEGGCXCENCE ACCXEGG:

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US-08-802-981-143; Sequence 143, Application US/08802981; Patent No. 6037137
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/331,383
FILING DATE: 28-OCT-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weber, Ellen Lauver
REGISTRATION NUMBER: 32,762
REFERENCE/DOCKET NUMBER: 016865-000110US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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                                                                                                           APPLICANT: Komoriya, Akira
APPLICANT: Packard, Beverly S.
TITLE OF INVENTION: Compositions for the Detection of Enzyme
TITLE OF INVENTION: Activity in Biological Samples and Methods of Use Thereof
                                                                             NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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TITLE OF INVENTION: Compositions for the Detection of
TITLE OF INVENTION: Protease in Biological Samples and Methods of Use Thereof
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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STREET: Two ..... CITY: San Francisco
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CITY: San Francisco
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                                                              AMDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
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SYSTEM: PC-DOS/MS-DOS
                                                        Townsend and Townsend and Crew LLF
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50.0%;
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Pred. No. 1.7e+05;
4; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 58, Application US/08722719 Patent No. 6001606 GENERAL INFORMATION:
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Best Local
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                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                               FILING DATE: 30-SEP-1990
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
PRIOR APPLICATION UMBER: US 08/173,209
                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
STREET: 1100 NEW YORK AVENUE, N.W., SUITE 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Hunter, Tom
REGISTRATION NUMBER: 38,498
REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: THERAPEUTIC COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: TREATING DISEASE STATES WITH MYELOID PROGENITOR INHIBITOR TITLE OF INVENTION: FACTOR-1 (MPIF-1), MONOCYTE COLONY INHIBITORY FACTOR TITLE OF INVENTION: (M-CIF), AND MACROPHAGE INHIBITORY FACTOR-4 (MIP-4)
                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                        APPLICATION NUMBER: US 0 FILING DATE: 22-DEC-1993
                                                                                                                                                                                                                                                                                              ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                   CITY: WASHINGTON
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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94111-3834
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ADAMS, MARK D.
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                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ROSEN, CRAIG A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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08-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STEVEN M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64.3%;
50.0%;
                                                                                                                                                        US/08/722,719
                  US 08/208,339
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Pred. No. 1.7e+05;
4; Mismatches 0;
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PRIOR APPLICATION DATA:

FILING DATE: APPLICATION NUMBER:

05-MAY-1995

US 08/446,881

US 08/465,682

PRIOR APPLICATION DATA:

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Patent No.
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Best Local S
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INFORMATION FOR SEQ ID NO: 58:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/722,719
FILING DATE: 30-SEP-1996
CLASSIFICATION: 435
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                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 06-JUN-1995
ATTORNEY/AGENT INFORMATION:
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                                                            APPLICATION NUMBER: US 0: FILING DATE: 22-DEC-1993 PRIOR APPLICATION DATA:
                                                                                                              PRIOR APPLICATION DATA:
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               PRIOR APPLICATION DATA:
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CITY: WASHINGTON
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REGISTRATION NUMBER: 36,688
REFERENCE/DOCKET NUMBER: 1488.0330007
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                               APPLICATION NUMBER: FILING DATE: 08-MAI
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CIS-VPLSVPC 10
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5. 6001606
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7; Conserv
                                                                                                                                                                                                                                                                                      TRY: USA
20005-3934
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RUBIN, STEVEN M.
LI, HAODONG
ADAMS, MARK D.
                                                                                                                                                                                                                                                                                                                                                      3: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C
1100 NEW YORK AVENUE, N.W., SUITE 600
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                          JMBER: US 08/208,339
08-MAR-1994
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                                                                                                 US 08/173,209
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Pred. No. 37;
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; SEQUENCE CHARACTERISTICS:

; LENGTH: 73 amino acids

; TYPE: amino acid

STRANDEDNESS: not releva

; TOPOLOGY: Linear

; MOLECULE TYPE: peptide

US-08-722-719-26
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US-08-722-719-57
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
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APPLICATION NUMBER: US 0
FILING DATE: 06-JUN-1995
                                                                                      FILING COLOR OF THE PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/173,209

APPLICATION NUMBER: 22-DEC-1993
                                                                                                                                                                                                OPERALLAS SOFTWARE: Patentin Release #1... CURRENT APPLICATION DATA: US/08/722,719
                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: ADAMS, MARK D.

TITLE OF INVENTION: THERAPEUTIC COMPOSITIONS AND METHODS FOR

TITLE OF INVENTION: TREATING DISEASE STATES WITH MYELOID PROGENITOR INHIBITO

TITLE OF INVENTION: FACTOR-1 (MPIF-1), MONOCYTE COLONY INHIBITORY FACTOR

TITLE OF INVENTION: (M-CIF), AND MACROPHAGE INHIBITORY FACTOR-4 (MIP-4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 36,688
REFERNCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
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ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 06-JUN-1995
FILING DATE: 08-MAR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 01
FILING DATE: 05-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                  PRIOR APPLICATION DATA:

APPLICATION UMBER: US 08/208,339
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                                                                                                                                                                                                                                                                                                                                                                                   STATE:
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63.6%;
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                                                                                                                                                                                                                                               Release #1.0, Version #1.30
                     US 08/446,881
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    Mismatches

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APPLICATION NUMBER:

06-JUN-1995

US 08/465,682

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Patent No. 6001606
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                                                                                                                                                                                                                                                                                       ZIP: 20005-33-3
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FIRM PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
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APPLICANT:
APPLICANT:
                                                    APPLICATION NUMBER: US 08/208,339
FILING DATE: 08-MAR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,881
FELING DATE: 05-MAY-1995
                    PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
FILING DATE: 22-DEC-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 73 amino acids
TYPE: amino acid
STRANDEDNESS: not relev
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)_371_2600
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ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/722,719 FILING DATE: 30-SEP-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. STREET: 1100 NEW YORK AVENUE, N.W., SUITE 600
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DATE:
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ADAMS, MARK D.
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 06-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THERAPEUTIC COMPOSITIONS AND METHODS FOR TREATING DISEASE STATES WITH MYELOID PROGENITOR INHIBITORY FACTOR-1 (MPIF-1), MONOCYTE COLONY INHIBITORY FACTOR (M-CIF), AND MACROPHAGE INHIBITORY FACTOR-4 (MIP-4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61.6%;
                  US 08/465,682
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Pred. No. 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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Query Match
Best Local Similarity
""" nes 7; Conserve
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US-08-722-719-24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 24,
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TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                               ZIP: 20005-3934

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                APPLICATION NUMBER:
FILING DATE: 05-MAY-
PRIOR APPLICATION DATA:
                                                                                                                                                                          APPLICATION NUMBER: US 0: FILING DATE: 22-DEC-1993 PRIOR APPLICATION DATA:
                FILING DATE: 06-JUN-
PRIOR APPLICATION DATA:
                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
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LENGTH: 75 amino acids
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FILING DATE: 06-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: STEFFE, ERIC K.
                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
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                                                                                                                                        APPLICATION NUMBER: US 08/208,339 FILING DATE: 08-MAR-1994
                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/722,719 FILING DATE: 30-SEP-1996
APPLICATION NUMBER:
                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P
STREET: 1100 NEW YORK AVENUE, N.W., SUITE 600
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STRANDEDNESS: not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
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                                                                                     05-MAY-1995
                                 06-JUN-1995
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                                                   US 08/465,682
                                                                                                     US 08/446,881
US 08/468,775
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Pred. No. 39;
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FILING DATE: 06-JUN-1995 ATTORNEY/AGENT INFORMATION:

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Best Local
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TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
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APPLICANT:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 76 amino acids
TYPE: amino acid
STRANDEDNESS: not relev
TOPOLOGY: linear
                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/722,719
FILING DATE: 30-SEP-1996
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                APPLICATION NUMBER: US 08 FILING DATE: 06-JUN-1995 PRIOR APPLICATION DATA:
                                                                                                                         APPLICATION NUMBER: US 0 FILING DATE: 08-MAR-1994 PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US 08
FILING DATE: 22-DEC-1993
PRIOR APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                    FILING DATE: 05-MAY-
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OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATE: Patentin Release #1.0, Version #1.30
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CITY: WASHINGTON
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Local Similarity 63.6%;
nes 7; Conservativo
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                                                                                      APPLICATION NUMBER: US 0 FILING DATE: 05-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: STEFFE, ERIC K. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                     CLASSIFICATION:
APPLICATION NUMBER: US 08/468,775
                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
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ADAMS, MARK D.
                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
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                                                                                                         US 08/446,881
                                                                                                                                                             US 08/208,339
                                                                                                                                                                                                                  us 08/173,209
                                                     US 08/465,682
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Pred. No. 40
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; TYPE: amino acid
; STRANDEDNESS: not
; TOPOLOGY: linear
; MOLECULE TYPE: prote
US-08-722-719-56
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                                                                                                                                                                FILING DATE: 30-SEP-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/173,209
FILING DATE: 22-DEC-1993
PRIOR APPLICATION NUMBER: US 08/208,339
FILING DATE: 08-MAR-1994
PRIOR APPLICATION NUMBER: US 08/446,881
APPLICATION NUMBER: US 08/446,881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: LI, HAODO
APPLICANT: ADAMS, MA
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/722,719
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                         APPLICATION NUMBER: US 0 FILING DATE: 06-JUN-1995 ATTORNEY/AGENT INFORMATION:
                                                                                                FILING DATE: 05-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 01
FILING DATE: 06-JUN-1995
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                                                                                  PRIOR APPLICATION DATA:
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TELEFAX: (202) 371-2540
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: WASHINGTON
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NAME: STEFFE, ERIC REGISTRATION NUMBER:
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              ERIC K.
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63.6%;
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                                                                   US 08/468,775
                                                                                                                   US 08/465,682
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Pred. No. 4
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: THE
TITLE OF INVENTION: TRE
TITLE OF INVENTION: FAC
TITLE OF INVENTION: (M-
NUMBER OF SEQUENCES: 64
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC -DOS/MS-DOS
                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/468,775
FILING DATE: 06-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                           APPLICATION NUMBER: US 0 FILING DATE: 08-MAR-1994 PRIOR APPLICATION DATA:
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PRIOR APPLICATION DATA:
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LENGTH: 76 amino acids
TYPE: amino acid
STRANDEDNESS: not relev
                                                                                                                                                                       PRIOR APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
ELECOMMUNICATION INFORMATION:
                  REFERENCE/DOCKET NUMBER:
                              NAME: STEFFE, ERIC K.
REGISTRATION NUMBER:
                                                                                                                                        APPLICATION NUMBER: FILING DATE: 06-JU
                                                                                                                                                                                         APPLICATION NUMBER: US 08 FILING DATE: 05-MAY-1995
                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: WASHINGTON
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                                                                                                                                      06-JUN-1995
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63.6%;
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                                                                                                                                                                                                                                                                                                                 us 08/173,209
                                                                                                                                                                                                           US 08/446,881
                                                                                                                                                      US 08/465,682
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                           36,688
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              1488.0330007
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Pred. No. 4
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SEQUENCE CHARACTERISTICS:
LENGTH: 77 amino acids
TYPE: amino acid
STRANDEDNESS: not relev
                                                                                                                                          APPLICATION NUMBER: US 08/
FILING DATE: 08-MAR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 05-MAY-1995
PRIOR APPLICATION UNMER: US 08/
PRIOR APPLICATION NUMBER: US 08/
FILING DATE: 06-JUN-1995
PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US/OF
FILING DATE: 30-SEP-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
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TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                 TELECOMMUNICATION INFORMATION:
                                                                      APPLICATION NUMBER: US 08/468,775
FILING DATE: 06-JUN-1995
ATTORNEY_AGENT INFORMATION:
NAME: STEFFE, ERIC K.
                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 22-DEC-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 20005-3934
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                REGISTRATION NUMBER: 36,688
REFERENCE/DOCKET NUMBER: 1488.0330007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 1100 NEW CITY: WASHINGTON STATE: DC
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TELEPHONE:
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linear
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(02) 371-2540
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 371-2600
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Pred. No. 4
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INFORMATION FOR SEQ ID NO:

SEQUENCE CHARACTERISTICS:

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; MOLECULE TYPE: protein US-08-722-719-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: PRT; ORGANISM: Homo sapiens US-09-044-796A-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 09/0
PRIOR FILING DATE: 1998-03-20
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 12
LENGTH: 77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
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Patent No. 6001606
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Gentz, Reiner L.
APPLICANT: Coleman, Timothy A.
TITLE OF INVENTION: Expression Control Sequences
FILE REFERENCE: PV447
                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                      APPLICANT: ADAMS, MATTILE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                            APPLICANT: ROSEN, CRAIG A. APPLICANT: RUBIN, STEVEN M. APPLICANT: LI, HAODONG
                                                                                                     NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 77 amino acids
TYPE: amino acid
STRANDEDNESS: not rele
TOPOLOGY: linear
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                                    STATE:
                                                                   STREET:
                COUNTRY:
                                                                   ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C STREET: 1100 NEW YORK AVENUE, N.W., SUITE 600
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                                                   WASHINGTON
20005-3934
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ADAMS, MARK D.
                  USA
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    Mismatches

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Pred. No. 40
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Pred. No. 4
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US-08-722-719-60
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Best Local Similarity
""" 7) Conserve
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                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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TELEFAX: (202) 371-2540
INFORMATION FOR SEQ ID NO:
                                                                                                                                                   APPLICANT: ROSEN, CRAIG A.
APPLICANT: RUBIN, STEVEN M.
APPLICANT: LI HADDONG
APPLICANT: LI HADDONG
APPLICANT: LI HADDONG
TITLE OF INVENTION: THERAPEUTIC COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: TREATING DISEASE STATES WITH MYELOID PROGENITOR INHIBITO
TITLE OF INVENTION: FACTOR-1 (MPIF-1), MONOCYTE COLONY INHIBITORY FACTOR
TITLE OF INVENTION: (M-CIF), AND MACROPHAGE INHIBITORY FACTOR-4 (MIP-4)
NUMBER OF SEQUENCES: 64
CORRESPONDENCE SIGNAMENT PROCEED GOLDSTEIN & FOX P.L.L.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 08/446,881 FILING DATE: 05-MAY-1995 PRIOR APPLICATION NUMBER: US 08/465,682 APPLICATION NUMBER: US 08/465,682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 0 FILING DATE: 08-MAR-1994 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: |
FILING DATE: 22-DEC-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
COUNTRY: USA
ZIP: 20005-3934
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 06-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: STEFFE, ERIC K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 06-JUN-
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/0 FILING DATE: 30-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13 CISYTPRSIPC 23
                                                                                      STATE:
                                                                                                            CITY:
                                                                                                                             ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. STREET: 1100 NEW YORK AVENUE, N.W., SUITE 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CIS-VPLSVPC 10
                                                                                                          WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08722719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
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    Mismatches

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Pred. No. 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
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Gaps

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COMPUTER: IBM PC Compatible
DOENNING SYSTEM, PCDDSS/MS DOS
SOFTMANEE BEACHLI RESE $1.0, Version $1.30

CURRENT APPLICATION MATA. CRESS $1.1, Version $1.30

CURRENT APPLICATION MATA.

APPLICATION MANEER: US.08/173,209

FILING DAYE: 2-DEC-1993

PRIOR APPLICATION DAYN:

APPLICATION NUMBER: US.08/208,339

FILING DAYE: 08-MAN-1994

PRIOR APPLICATION DAYN:

APPLICATION NUMBER: US.08/465,881

FILING DAYE: 05-MAN-1995

PRIOR APPLICATION NUMBER: US.08/465,682

FILING DAYE: 05-MAN-1995

FRICA APPLICATION NUMBER: US.08/465,682

FILING DAYE: 06-JUN-1995

APPLICATION NUMBER: US.08/468,775

FILING DAYE: 06-JUN-1995

APPLICATION NUMBER: US.08/468,775

FRICA APPLICATION NUMBER: US.08/468,775

FRICA APPLICATION NUMBER: US.08/468,775

FRICA APPLICATION NUMBER: US.08/468,775

FRICA APPLICATION NUMBER: US.08/468,775

INFORMENT/AGENT NUMBER: 148.0330007

FILING DAYE: 06-JUN-1995

APPLICATION NUMBER: US.08/468,775

FRICA APPLICATION NUMBER: US.08/468,775

INFORMENT/AGENT NUMBER: 148.0330007

FILING DAYE: 06-JUN-1995

APPLICATION NUMBER: US.08/468,775

INFORMENT/AGENT NUMBER: 158.688

INFORMANCE CHARACTON: UNCOMMATION:

SOUBMENT CHARACTON: US.08/468,775

INFORMATION FOR SED ID NO: 060: SUBJECT OF THE PRIOR OF THE PRIO
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Run on:
                                                                                        OM protein - protein search, using sw model
June 17, 2002, 15:58:27; Search time 95.43 Seconds (without alignments)
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Copyright (c) 1993 - 2000 Compugen Ltd.
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US-09-761-636A-14 52

.062 Million cell updates/sec

Perfect score: Sequence: Scoring table: BLOSUM62 CISVPLVPC 9

283138 seqs, 96089334 residues Gapop 10.0 , Gapext 0.5

Searched:

Total number of hits satisfying chosen parameters: 283138

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100% Listing first 45 su summaries

Database PIR\_71:\* pir1:\*
pir2:\*
pir3:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ	7	6	IJ	4	ω	N		1	Result
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725	498	497	491	434	370	339	1876	551	397	2240	1440	1210	496	305	278	61	1639	407	287	3623	1015	577	154	416	416	347	347		Length	
N	N																2						2				N	N	BB	
JE0099	T45465	S53834	T46915	T01390	T25627	AI3609	T13801	JC7562	AC1877	T37057	SYHUQT	D88013	S51668	A82728	AF0936	JQ1086	T50119	T19895	H64690	T08618	C84918	T00416	D82795	A46559	A61404	D81043	A81988	T25817	ID	
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T02683 A47196	A61594 D71541	A23101 W5WL39	T41455	A35694	VHWV	A26838	S26985	T41246	F85943	в91098	A65072	F70757
hypothetical prote dual specificity p	thrombospondin - b probable inclusion	lon protein - Esch E5 protein - human	cut1 protein - fis	cutl protein - fis	structural polypro	prestalk protein p	probable DNA-direc	probable ribonucle	probable dehydroge	probable dehydroge	hypothetical prote	probable cation tr

# ALIGNMENTS

hypothetical protein K12D9.3 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15:Oct-1999 #sequence\_revision 15-Oct-1999 #text\_change 15-Oct-1999 C;Accession: T25817 R;Graves, T. RESULT T25817 submitted to the EMBL Data Library, November 1996
A; Description: The sequence of C. elegans cosmid K12D9,
A; Reference number: Z20093
A; Accession: T25817 A; Map position: 5 A; Introns: 165/3; 208/3 A;Gene: CESP:K12D9.3 A;Map position: 5 A;Cross-references: EMBL:U80030; PIDN:AAB37600.1; GSPDB:GN00023; CESP:K12D9.3 A;Experimental source: strain Bristol N2; clone K12D9 A; Molecule type: DNA A; Residues: 1-297 <GRA> A; Status: preliminary; translated from GB/EMBL/DDBJ

밁 Qy Query Match
Best Local Similarity
Matches 6; Conserv 169 CISLPIVTC 177 1 CISVPLVPC 9 Conservative 75.0%; 66.7%; 2; Score 39; DB Pred. No. 14; Mismatches 2 1; Length 297; Indels 0, Gaps

0;

RESULT A81988

probable N-acetyl-gamma-glutamyl-phosphate reductase (EC 1.2.1.38) NMA0676 (import C;Species: Neisseria meningitidis C;Date: 05-May-2000 #sequence\_revision 05-May-2000 #text\_change 02-Feb-2001

C;Accession: A81988
R;Parkhill, J.; Achtman, M.; James, K.D.; Bentley,
; Holroyd, S.; Jagels, K.; Leather, S.; Moule, S.;
Nature 404, 502-506, 2000 S.D.; Churcher, C.; Klee, S.R.; Mungall, K.; Quail, M.A.; Rajan

A;Title: Complete DNA sequence of a serogroup A strain of Neisseria menigitidis 22 A;Reference number: A81775; MUID:20222556 A;Accession: A81988

A:Status: preliminary
A:Molecule type: DNA
A:Residus: 1-347 <PAR>
A:Cross-references: GB:AL162753; GB:AL157959; NID:g7379120; PIDN:CABB3963.1; PID:g A, strain Z2491

A; Gene: argC; NMA0676 C; Genetics:

A; Experimental source:

serogroup

 $\label{eq:c:superfamily: N-acetyl-gamma-glutamyl-phosphate reductase $C$; Keywords: oxidoreductase$ 

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A; Molecule type: DNA
A; Residues: 1-416 <KAY>
C; Superfamily: A***
    A46559
keratin,
                                                                                                                      β
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A;Title: Hair-specific keratins: characterization and expression of a mouse type I kerath A; Reference number: A61404; MUID:92013235
A; Accession: A61404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          keratin A, type I - mouse
C;Species: Mus musculus (house mouse)
C;Date: 09-Sep-1994 #sequence_revision 09-Sep-1994 #text_change 03-May-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ri, H.; Qin, H.; Vamathevan, J.; Gill, J.; Scarlato, V.; Masignani, V.; Pizza, M. Science 287, 1809-1815, 2000
A; Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R. A; Title: Complete genome sequence of Neisseria meningitidis serogroup B strain MC58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-acetyl-gamma-glutamyl-phosphate reductase NMB1787 [imported] - Neisseria meningitidis C;Specles: Neisseria meningitidis C;Specles: Neisseria meningitidis C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 19-Jan-2001 C;Accession: D81043 R;Tettelin, H.; Saunders, N.J.; Heidelberg, J.; Jeffries, A.C.; Nelson, K.E.; Eisen, J.; R;Tettelin, H.; Saunders, N.J.; Heidelberg, J.; Jeffries, A.C.; Nelson, K.E.; Eisen, J.;
                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A:Gene: NMB1787
C:Superfamily: N-acetyl-gamma-glutamyl-phosphate reductase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Tettelin, H.; Saunders, N.J.; Heidelberg, J.; Jeffries, A.C.; Nelson, K.E.; Eisen, Hickey, E.K.; Haft, D.H.; Salzberg, S.L.; White, O.; Fleischmann, R.D.; Dougherty, B.T.; H.; Qin, H.; Vamathevan, J.; Gill, J.; Scarlato, V.; Masignani, V.; Pizza, M.
                                                                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary; not compared with conceptual translation
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A;Experimental source: serogroup B, strain MC58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-347 <TET>
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A;Accession: D81043
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                                                                                                                                                                                                                                                                                                                         Superfamily: cytoskeletal keratin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Accession: A61404
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Best Local
                                                                                                                    385 CVSNPCVPC 393
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                                                                                                                                                                                                                                   Local Similarity
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nes 6; Conser
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hair (clone MHKA-1) - mouse
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                                                                                                                                                                                                                               Pred.
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Pred. No. 16;
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                                                                                                                                                                                                                                                      Length 416;
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hypothetical protein T30B22.1 - C; Species: Arabidopsis thaliana

Arabidopsis thaliana

T00416

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1 CISVPLVP 8 |||||::| 78 CISVPMLP 85 Matches

6;

Conservative

Query Match Best Local Similarity

73.1%; 75.0%;

Score 38; DB Pred. No. 11;

DB 2; Length 154;

Mismatches

<u>,,</u>

Gaps

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J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.S.; Franca, S.C.; Franco, M.C.; Chado, M.A.; Madeira, A.M.B.N.; Madeira, H.M.E.; Marino, C.L.; Marques, M.V.; Marti A;Authors: Martins, E.M.F.; Matsukuma, A.Y.; Menck, C.F.M.; Miracca, E.C.; Miyaki, F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Palmieri Rodrigues, V.; Rosa, A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sa A;Authors: da Silva, A.C.R.; da Silva, F.R.; da Silva, A.M.; Silva, A.M.; Silva, A.M.; Vallada, H.; Van Sluys, M.A.; Verjovski-Almeida, S.; Vettore, A.; Reference number: A59328
A;Gene: xF0513
C;Superfamily: phage T4 lysozyme; phage T4 lysozyme homology
                                                                                                                                                                                                                                                                                                                                                                                                                                             A:Experimental source: strain 9a5c
R:Simpson, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, Briones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carrase, S.-Neto, E.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S. submitted to GenBank, June 2000
A;Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Title: The genome sequence of the plant pathogen Xylella fastidiosa. A;Reference number: A82515; MUID:20365717
A;Note: for a complete list of authors see reference number A59328 below
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Best Local Similarity
Grands 6; Conserv
                                                                                                                     C; Genetics:
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A;Accession: A46559
A;Status: preliminary
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C:Date: 03-Mar-1994 #sequence_revision 03-Mar-1994 #text_change 13-Aug-1999
C:Accession: A46559
                                                                                                                                                  A; Contents: annotation
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A; Residues: 1-154 <SIM>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 23-Mar-2001 C;Accession: D82795
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C; Species: Xylella fastidiosa
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A;Residues: 1-416 <BER>
A;Cross-references: GB:M27734; NID:g198585; PIDN:AAA39372.1; PID:g198586
C;Superfamily: cytoskeletal keratin
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A;Title: Cloning and characterization of a mouse type I hair keratin cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:AE003900; GB:AE003849; NID:g9105366; PIDN:AAF83323.1; GSPDB
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66.7%;
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Pred. No.
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C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 24-Nov-1999 C;Accession: T00416
R;Rounsley, S.D.; Lin, X.; Ketchum, K.A.; Crosby, M.L.; Brandon, R.C.; Sykes submitted to the EMBL Data Library, October 1998
A;Description: Arabidopsis thaliana chromosome II BAC T30B22 genomic sequenc A;Reference number: 214149
A;Reference number: 214149
A;Rocession: T00416
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-577 <ROU>
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A; Gene:
A; Map po
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A; Introns: 87/3; 126/3; 175/1; 264/3; 329/3; 507,
C; Superfamily: Arabidopsis thaliana hypothetical
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A;Experimental source: cultivar Columbia
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y. M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Nature 402, 761-768, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    probable ATP-dependent RNA helicase A [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001 C;Accession: C84918
                                                                                                                                            C;Species: Rattus norvegicus (Norway rat)
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 21-Jul-2000
C;Accession: T08618
C;Accession: T08618
R;Moestrup, S.K.; Kozyraki, R.; Kristiansen, M.; Kaysen, J.H.; Rasmussen, H.H.;
J. Biol. Chem. 273, 5235-5242, 1998
A;Title: The intrinsic factor vitamin Bl2 receptor and target of teratogenic ant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: DNA
A;Residues: 1-1015 <STO>
A;Cross-references: GB:AE002093; NID:g3738282; PIDN:AAC63624.1; GSPDB:GN00139
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                       A; Molecule type: mRNA
A; Residues: 1-3623 < MOE>
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                                                                     A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                              A; Accession: T08618
                                                                                                                     A; Reference number: 216459;
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  A; Cross-references:
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EMBL:AF022247; NID:g3834379; PIDN:AAC71661.1; PID:g3834380
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75.0%;
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75.0%;
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Pred.
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Pred. No.
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Tallon, L
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A;Gene: CUBILIN
A;Gene: CUBILIN
C;Superfamily: unassigned EGF-related proteins; EGF homology
C;Superfamily: unassigned EGF-related protein; intestine; kidney; peripheral mem
C;Keywords: egg yolk; endocytosis; glycoprotein; intestine; kidney; peripheral mem
F;1-20/Domain: signal sequence #status predicted <SIG>
F;1-36(2)/Product: intrinsic factor-B12 receptor CUBILIN #status predicted <MAT>
F;133-164/Domain: EGF homology <EGFT>
F:436-467/Domain: EGF homology <EGFF>
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R;Tomb, J.F.; White, O.; Kerlavage, A.R.; Clayton, R.A.; Sutton, G.G.; Fleischmann Peterson, S.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; N son, J.D.; Kelley, J.M.; Cotton, M.D.; Weldman, J.M.; Fujii, C.; Bowman, C.; Wattl Nature 388, 539-547, 1997

A;Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fras A;Title: The complete genome sequence of the gastric pathogen Helicobacter pylori A;Reference number: A64520; MUID:97394467

A;Accession: H64690
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                                                                                                                                                                                                                                   R:Steward, C.
R:Steward, C.
submitted to the EMBL Data Library, October 1996
a:Reference number: Z19192
                                                                                                                                                                                                                                                                                                                                                    hypothetical protein C41G7.4 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
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A; Residues: 1-287 < TOM>
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C;Date: 09-Aug-1997 #sequence_revision 09-Aug-1997 #text_change 18-Jun-1999
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C;Superfamily: site-specific DNA-methyltransferase (adenine-specific) Hpa
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A; Map position:
A; Introns: 27/2;
                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-407 <WIL>
                                                                                                                                                                                                   A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                  A; Gene: CESP:C41G7.4
                                                                                                    A; Experimental source:
                                                                                                                         A; Cross-references: EMBL: 281048;
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  107/3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
  151/3; 333/3; 373/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73.1%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71.2%;
                                                                                                    048; PIDN:CAB02841.1; GSPDB:GN00019; CESP:C41G7.4
C41G7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
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Pred. No. 2.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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71.2%;

Score

37;

В

2

Length

407;

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A:Gene: ENOD14

F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-61/Product: nodulin 14 #status predicted <MAT>
        probable AraC-family transcription regulator STY3756 [imported] -
C; Species: Salmonella enterica subsp. enterica serovar Typhi
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                                                                                                                                                                                                                                                                                                                                                                                              C:Comment: The gene encoding this protein is expressed in the second stage of root nodu
                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-61 <SCH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Reference number: JQ1084; MUID: 93005665 A; Accession: JQ1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nodulin-14 precursor - garden pea (fragment)
C:Species: Pisum sativum (garden pea)
C:Date: 23-Nov-1991 #sequence_revision 23-Nov-1991 #text_change 20-Apr-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Residues: 1-1639 <SEE>
A;Cross-references: EMBL:AL157734; PIDN:CAB75776.1; GSPDB:GN00066; SPDB:SPAC1834.08
A;Experimental source: strain 972h(-); cosmid cl834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Seeger, K.; Harris, D.; Wood, V.; Rajandream, M.A.; Barrell, B.G. submitted to the EMBL Data Library, February 2000
A;Reference number: Z25039
A;Accession: T50119
                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:S45162; NID:g257036; PIDN:AAB23538.1; PID:g257037
A;Experimental source: root nodule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Title: Sequential induction of nodulin gene expression in the developing pea nodule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Scheres, B.; van Engelen, F.; van der Knaap, E.; van de Wiel, C.; van Kammen, Plant Cell 2, 687-700, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Schizosaccharomyces pombe
C;Date: 09-Jun-2000 #sequence_revision 09-Jun-2000 #text_change 09-Jun-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       probable sensory transduction histidine kinase [imported] - fission yeast (Schizosaccha)
                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                      Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession: JQ1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
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Matches 6; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            557 SVPLLPC 563
                                                                     14.
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                                                                                                                                   21 NIPLVPC 27
                                                                                                                                                                                                                 Local Similarity es 5; Conser
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les 6; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              preliminary; translated from GB/EMBL/DDB
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                                                                                                                                                                                                                 Conservative
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enterica subsp. enterica serovar Typhi
                                                                                                                                                                                                                                67.38;
71.48;
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85.7%;
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                                                                                                                                                                                                                                   Score 35; DE Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 36;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 42;
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                                                                                                                                                                                                                                                      Length 61;
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                   Salmonella enterica su
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                                                                                                                                            Matches
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Local

Similarity

67.3%; 57.1%;

Score 35; Pred. No.

2

Length 305;

Mismatches рв 73;

0,

Gaps

Conservative

3 SIPTIPC 9

SVPLVPC

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R;Simpson, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, Briones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carras as-Neto, E.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S.; submitted to GenBank, June 2000
A;Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; chado, M.A.; Madeira, A.M.B.N.; Madeira, H.M. F.; Marino, C.L.; Marques, M.V.; Martino, C.L.; Marques, M.V.; Markino, C.L.; Marques, M.V.; Marques, M.V.; Markino, C.L.; Marques, M.V.; Markino, V.; Nosa, A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sa, A;Authors: da Silva, A.C.R.; da Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silva, T., W.A.; da Silva, M.A.; Verjovski-Almeida, S.; Vettore, A.
                                                   A; Contents: annotation C; Genetics:
A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-278 <PAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 09-Nov-2001 C;Accession: AF0936 R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, R;Parkhill, J.; Dougan, G.; James, R;Parkhill, R;Parkhill, J.; Dougan, G.; James, R;Parkhill, R;Parkhill, R;Parkhill, R;Parkhill, J.; Dougan, G.; James, R;Parkhill, R;Pa
                                                                                                                                                                                     A; Reference number: A59328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Cross-references: GB: AE003943; GB: AE003849; NID: g9106006; PIDN: AAF83878.1; GSPDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-305 <SIM>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R; anonymous, The Xyle Nature 406, 151-157,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Xylella fastidiosa
C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 20-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Steven: A;Title: Complete genome sequence of a multiple drug resistant Salmonella enterica A;Reference number: AB0502; PMID:11677608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; F., S.; Moule, S.; O'Gaora, P.
Nature 413 040-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Experimental source: strain 9a5c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A82728
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Nature 413, 848-852, 2001
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nes 5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 ISVPLVPC 9
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

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  Viruses;
                                                                             Probable E5
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosid
eurosids I; Fabales; Fabaceae; Papilionoideae; Vicieae; Pisum.
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01-AUG-1992 (Rel. 23, Last sequence up
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Nodulin 14 precursor (N-14) (Fragment)
                           Human papillomavirus type
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-93005665; PubMed-2152123; Scheres B., van Engelen F., van der Knaap E., van
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                                                                           Interpro: IPRO00603; 3A_mov.
Pfam; PF00803; 3A; 3A
DNA-binding; Transport.
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                                                                                                                                                                   use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                             Kim S.H., Park Y.I.;
Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: INVOLVED IN TRANSPORT OF THE VIRUS FROM THE INITIALLY
INFECTED CELLS TO ADJACENT CELLS.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Cucumber mosaic virus (strain As) (CMV).
Viruses; ssRNA positive-strand viruses, no DNA stage; Bromoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
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036639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U21941; AAC54855.1; -.
InterPro; IPR004270; Papilloma_E5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Human papillomavirus type 70 genome cloned from overlapping PCR products: complete nucleotide sequence and genomic organization."; J. Clin. Microbiol. 34:802-809(1996).
                                                                                                                                        EMBL; AF013291; AAB67166.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                        Cucumovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cell-to-cell movement protein (MP) (3A protein).
                                                                                                                                                                                                                                                                                           -1- SIMILARITY: BELONGS TO THE CUCUMOVIRUSES/BROMOVIRUSES 3A FAMILY.
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MEDLINE=96249586; PubMed=8815087;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=39457;
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24 CCSVPLLP
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NCE 78 AA;
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              Score 35;
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Pred. No.
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                                                                            2B47059288DC1069
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              DB
21;
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15-DEC-1998
Coagulation
                                Pfam; PF
Pfam; PF
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PRINTS;
SMART; S
SMART; S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pendurthi U.R., Anderson K.D., James H.L.;

"Characterization of a full-length cDNA for rabbit factor x.";

"Thromb. Res. 85:503-514(1997).

-i- FUNCTION: FACTOR XA IS A VITAMIN K-DEPENDENT GLYCOPROTEIN THAT CONVERTS PROTHROMBIN TO THROMBIN IN THE PRESENCE OF FACTOR VA, CA++, AND PHOSEHOLIPID DURING BLOOD CLOTTING.

-i- CATALYTIC ACTIVITY: Preferential cleavage: Arg-|-Thr and then Arg-|-Ile bonds in prothrombin to form thrombin.

-i- SUBUNIT: THE TWO CHAINS ARE FORMED FROM A SINGLE-CHAIN PRECURSOR BY THE EXCISION OF TWO ARG RESIDUES AND ARE HELD TOGETHER BY 1 OR MORE DISULFIDE BONDS.

-i- PTM: THE VITAMIN K-DEPENDENT, ENZYMATIC CARBOXYLATION OF SOME GLOTAMIC ACID RESIDUES ALLOWS THE MODIFIED PROTEIN TO BIND CALCITING OF THE TATTERY.
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RABIT
                                                                                                                                                                                                                                                                                     EMBL;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
                                                                                                                                                                    InterPro;
InterPro;
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MISCELLANBOUS: CALCIUM ALSO BINDS, WITH STRONGER AFFINITY TO ANOTHER SITE, BEYOND THE GLA DOMAIN.

SIMILARITY: CONTAINS 2 EGF-LIKE DOMAINS.

SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1; ALSO KNOWN AS THE
                                                                               erPro; IPR000294; Vitk_dep_6
m; PF00008; EGF; 2.
m; PF00594; 9la; 1.
m; PF00089; trypsin; 1.
mTS; PR00722; CHYMOTRYPSIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALCIOM (BY SIMILARITY).

PTM: N- AND O-GLYCOSYLATED (BY SIMILARITY).

PTM: THE ACTIVATION PEPTIDE IS CLEAVED BY FACTOR IXA (IN THE INTRINSIC PATHWAY).

ON THE ACTIVATION PEPTIDE IS CLEAVED BY FACTOR IXA (IN THE EXTRINSIC PATHWAY).
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S; PR00001; GLABLOOD.

November 1.

SM000179; EGF_CA; 1.

SM00001; EGF_like; 1.

SM00069; GLA; 1.

SM00020; Tryp_SPC; 1.
                                                                                                                                                                                                                                                                                     AF003200; AAB62542.1; -. P00742; 1HCG.
                                                                                                                                                               j IPR000152; Asx_hydroxyl.
j IPR001314; Chymotrypsin.
j IPR000561; EGF-like.
j IPR000742; EGF_2.
j IPR001881; EGF-Ca.
j IPR0012383; GLA_blood.
j IPR001254; Trypsin.
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37, Last sequence update)
37, Last sequence update)
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r X precursor (EC 3.4.21.6) (Stuart
                                                                                                                                                   VitK_dep_GLA.
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1 CISVPLVPC CISTELFPC

9 172

Query Match Best Local S Matches 6

Similarity 6; Conserv

Conservative

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Score 35; DB Pred. No. 36; O; Mismatches

DB 36;

Length 490

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PS001187; EGF_CA; 1.
PS000011; GLU_CARBOXYLATION;
PS50240; TRYPSIN_DOM; 1.
PS00134; TRYPSIN_HIS; 1.
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PS00022;
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EGF_1; 1.
EGF_2; 2.
EGF_CA; 1.
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; Calcium-binding; Vitamin
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01-MAY-1992
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01-MAR-2002
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TRANSMEM
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 Bifunctional
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P07814;
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                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                      Transferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U66560;
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01-MAR-2002 (Rel. 41, Last sequence up
01-MAR-2002 (Rel. 41, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                     TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Belanger A.E., Besra G.S., Ford M.E., Mikusova K., Brennan P.J., Inamine J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=97030297; PubMed=8876238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-215
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Probable arabinosyltransferase A (EC 2.4.2.-).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   target
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                                                                                                                          CLAVPLLP
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Natl. Acad. Sci. U.S.A. 93:11919-11924(1996).
                                                                                                                                                                       l Similarity
5; Conserv
        (Rel. 08, Created)
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                                                                                                                                                                                                                                                                                                                                                                                                           resistance
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aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA
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Pfam; PF00043; CST_C; 1.

Pfam; PF001329; HGTP_anticodon; 1.

Pfam; PF00749; tRNA-synt_1c; 1.

Pfam; PF00587; tRNA-synt_2b; 1.

Pfam; PF00488; WHEP-TRS; 3.

PRINTS; PR00987; TRNASYNTHGLU.

PRINTS; PR01046; TRNASYNTHPRO.

PROSITE; PS00178; AA_TRNA_LIGASE_I; 1.

PROSITE; PS00179; AA_TRNA_LIGASE_II_2; FAPROSITE; PS00179; AA_TRNA_LIGASE_II_2; FAPROSITE; PS000339; AA_TRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; FAPROSITE; ARATRNA_LIGASE_II_2; FAPROSITE; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_III_2; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; ARATRNA_LIGASE_II_2; AR
                                                                                                                                                                                                                                             InterPro; IPR002106; AA_tRNA_ligase_II.
InterPro; IPR004046; GST_C.
InterPro; IPR004154; HGTP_anticodon.
InterPro; IPR000738; WHEP-TRS.
InterPro; IPR000738; WHEP-TRS.
InterPro; IPR0002314; tRNA-synt_lc.
InterPro; IPR001412; tRNA-synt_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X54326; CAA38224.1;
EMBL; X07466; CAA30354.1;
PIR; A38663; SYHUQT.
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MIM; 138295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Cervical carcinoma; MEDLINE=88262551; PubMed=3290852;
                                                                                                                                                                                                                             InterPro; IPR002316; tRNA-synt_pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed.
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translation elongation factors.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAUTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                 P00962; 1GTR.
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2002 (Rel. 41, Last annotation update)
01-MAR-2002 (Rel. 41, Last annotation update)
RING finger protein 27 (Glioblastoma-expressed ring finger protein)
(Tripartite motif-containing protein 8).
RNP27 OR GERP OR TRIM8.
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"A novel RING finger-B box-coiled-coil protein, GERP.";
Biochem. Biophys. Res. Commun. 279:482-486(2000).
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                                                                                                                             modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SUBCELLULAR LOCATION: Nuclear
-!- TISSUE SPECIFICITY: WIDELY EXPRESSED.
-!- DOMAIN: THE COLLED COIL DOMAIN IS REQUIRED FOR HOMODIMERIZATION
-!- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGER.
-!- SIMILARITY: CONTAINS 2 B BOX-TYPE ZINC FINGERS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATP (BY SIMILARITY). WHEP-TRS 1. WHEP-TRS 2.
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"HIGH" REGION.
"KMSKS" REGION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLUTAMYL-TRNA SYNTHETASE
3 X 57 AA APPROXIMATE REI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHARGED
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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1e+02;
                                                                                                                                                                                                                                            There are no restrictions 
ng as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             o S., Luzi L.
Guffanti A.,
                                                                                                                                                                                                                                                                                                               EMBL outstation
                                                                                                                                                                                                                                                                                                                          a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _MOUSE __MOUSE STANDARD; PRT; 551 AA.

Q99PJ2; Q99PQ4;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
16-OCT-2001 (Rel. 40, Last annotation update)
RING finger protein 27 (Glioblastoma-expressed ring finger protein)
(Tripartite motif protein 8).
RNF27 OR GEEP OR TRIM8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00643; zf-B_box; 1. Pfam; PF00097; zf-C3HC4; 1. SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS50119; ZF_BBOX; FALSE_NEG.
PROSITE; PS00518; ZF_RING_1; 1.
PROSITE; PS50089; ZF_RING_2; 1.
Nuclear protein; Coiled coil; Zinc-finger; Repeat.
                                                                                                                                                                                                                                                                                                        Reymond A., Meroni G., Fantozzi A., Merla G., Cairo S., Luzi Riganelli D., Zanaria E., Messali S., Cainarca S., Guffanti Minucci S., Pelicci P.G., Ballabio A.; "The tripartite motif family identifies cell compartments."; EMBO J. 20:2140-2151(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                              Vincent S.R., Kwasnicka D.A., Fretier P.;
"A novel RING finger-B box-coiled-coil protein, GERP.";
Blochem. Biophys. Res. Commun. 279:482-488(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000315; Znf_bbox.
InterPro; IPR001841; Znf_ring.
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=21231161; PubMed=11331580;
                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 196-463 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=20568703; PubMed=11118312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                     -i- DOMAIN: THE COILED COIL DOMAIN IS REQUIRED FOR HOMODIMERIZATION (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 SVPLYPC
                                                                                                                     -i- SIMILARITY: CONTAINS 1 RING-TYPE ZINC FINGERS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 SVPLVPC 9
                                                                                                                                                                                                       SUBUNIT: HOMODIMERS (BY SIMILARITY).
SUBCELLULAR LOCATION: Nuclear (By similarity).
SUBCELLULAR LOCATION: Nuclear (By similarity).
DEVELOPMENTAL STAGE: AT 10.5 AND 12.5 DPC, EXPRESSED IN THE EXE (LENS CENTRAL NERVOUS SYSTEM. AT 14.5 DPC, EXPRESSED IN THE EXE (LENS AND INNER NEURAL LAYER OF THE RETINA), IN THE PRIMITIVE GLOMERULI OF THE DEVELOPING KIDNEY, IN THE VILLI OF THE GUT AND IN THE
                                                                                                                                                                                           DORSAL ROOT GANGLIA.
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85.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COILED COIL (POTENTIAL).
H -> R (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B BOX-TYPE 1.
B BOX-TYPE 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RING-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1FEF89029EB9BACB CRC64;
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                                                                                                                                                                                                                                                                                                                                                                 Guffanti A.,
                                                                                                                                                                                                                                                                                                                                                                               Luzi L.,
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M172_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M172_HUMAN

M172_HUMAN

Q14596; Q13173; Q15026;
Q1-NOV-1997 (Rel. 35, Created)
Q1-NOV-1997 (Rel. 35, Last sequence update)
Q1-NOV-1997 (Rel. 35, Last annotation update)
Q1-MAR-2002 (Rel. 41, Last annotation update)
Membrane component, chromosome 17, surface marker 2 (Ovarian antigen CA125) (IAI-3B) (Next to BRCAl gene 1 protein).
M17S2 OR 1A13B OR NBR1 OR KIAA0049.

M17S2 OR 1A13B OR WBR1 OR KIAA0049.

M17S2 OR 1A13B OR UBR1 OR KIAA0049.
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Best Local
SEQUENCE OF 412-508 FROM N.A.

MEDLINE-96090243; PubMed-7581362;

Harsîman K., Bell R., Rosenthal J., Katcher H., Miki Y.,

Swenson J., Gholami Z., Frye C., Ding W., Dayananth P.,

Eddington K., Norris F.H., Bristow P.K., Phelps R., Hatti

Stone S., Shaffer D., Bayer S., Hussey C., Tran T., Lai N
                                                                                                                                                                                                                                                                                                       MEDLINE=96051398; PubMed=7584044;
Nomura N., Nagase T., Miyajima N., Sazuka T., Tar
Seki N., Kawarabayasi Y., Ishikawa K.-I., Tabata
                                                                                                                                                                                                Prediction of the coding sequences of unidentified human The coding sequences of 40 new genes (KIAA0041-KIAA0080) canalysis of cDNA clones from human cell line KG-1."; DNA Res. 1:223-229(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIINE-94348506; PubMed-8069304;
Campbell I.G., Nicolai H.M., Foulkes W.D., Senger G.,
Allan G., Boyer C., Jones K., Bast R.C. Jr., Solomon F
                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Bone marrow;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hum. Mol. Genet. 3:589-594(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ^{\text{n}}A novel gene encoding a B-box protein within the BRCAl region at 17q21.1.\,^{\text{n}};
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONFLICT
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Black D.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-9606;
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Pfam; PF00097; zf-C3HC4; 1.
SMART; SM00184; RING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AF281047; AAG53088.1; -.
EMBL; AF220035; AAG53489.1; -.
MGD; MGI:1933302; Trim8
InterPro; IPRO00315; Znf_bbox.
InterPro; IPRO01841; Znf_ring.
Defa: PEOCE (19001841; Znf_ring.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE: PS50119; ZF_BBOX; FALSE_NEG. PROSITE: PS00518; ZF_RING_1; 1. PROSITE: PS50089; ZF_RING_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 SVPLYPC 367
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551 AA;
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85.7%;
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B BOX-TYPE 2.
COILED COIL (POTENTIAL).
COILED COIL (POTENTIAL).
G -> A (IN REF. 2).
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                                                                                                                                                                                                                                                                                                          Tanaka A., Sato
ata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                            Hattier T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stamp G.W.,
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Best Local
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                                                                                                                   Urry L.A., Ramos J., Submitted (XXX-1993)
                                                                                                                                                                                                                                                                     01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
SEQUENCE
                                                                                                                                                                                                                    Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniat
                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                         Xenopodinae; Xenopus.
                                                                                                                                                                                                       Amphibia; Batrachia; Anura;
                                                                                                                                                                                                                                                  THBS1 OR TSP1.
                                                                                                                                                                                                                                                              Thrombospondin 1 precursor
                                                                                                                                                                                                                                                                                                                       TSP1_XENLA
P35448;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00016; OPR; 1.
SMART; SM00291; ZnF_ZZ; 1.
PROSITE; PS01357; ZF_ZZ_1;
PROSITE; PS50135; ZF_ZZ_2;
                                                                                                                                                                            NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00627; UBA; Pfam; PF00569; ZZ; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Comparison of the positional CIOH BRCA1 gene.";
Hum. Mol. Genet. 4:1259-1266(1995)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rosteck P.R., Skolnick M.H., Shattuck-Eidens D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity es 6; Conserv
Y L.A., Ramos J., Duquette M., Desimone D.W., Lawler J.;
mitted (XXX-1993) to the EMBL/GenBank/DDBJ databases.
FUNCTION: ADHESIVE GLYCOPROTEIN THAT MEDIATES CELL-TO-CELL AND
CELL-TO-MATRIX INTERACTIONS. CAN BIND TO FIBRINGGEN, FIBRONECTI
LAMININ, TYPE V COLLAGEN AND INTEGRINS ALPHA-V/BETA-1, ALPHA-
V/BETA-3 AND ALPHA-IIB/BETA-3 (BY SIMILARITY).
SUBUNIT: HOMOTRIMER; DISULFIDE-LINKED.
SIMILARITY: BELONGS TO THE THROMBOSPONDIN FAMILY.
SIMILARITY: CONTAINS 1 VWFC DOMAIN.
SIMILARITY: CONTAINS 3 EGF-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                     3 SVPLVPC
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SFPLVPC 141
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IPR000433; ZnF_
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85.7%;
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POLY-GLU.

POLY-GLU.

WGILCTALRSHSQAWSEVLKASLGF -> LC

PGLERGAEGKPGV (IN REF. 2).

R -> H (IN REF. 2).

R -> H (IN REF. 2).
                                                                                                                                                                                                    a; Craniata; Vertebrata; Euteleostomi;
Mesobatrachia; Pipoidea; Pipidae;
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InterPro;
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                                                                                                                                                                                                                                                                                                                   PROSITE; PS00022; EGF_1; FALSE_NEG PROSITE; PS01186; EGF_2; 1. PS50092; TSP1; 3. PROSITE; PS01208; VWFC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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SIMILARITY: CONTAINS 7 TSP TYPE-3 DOMAINS.
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P00740; 1IXA.
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; IPR001007;
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); tsp_1; 3.
2; tsp_3; 8.
3; vwc; 1.
31; EGF; 2.
31; EGF_11ke; 1.
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VWFC.
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      CELL ATTACHMENT SITE
BY SIMILARITY
BY GLCNAC
N-LINKED (GLCNAC
 MW.
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EGF-LIKE 2.
EGF-LIKE 2.
EGF-LIKE 3.
TSP TYPE-3 1.
TSP TYPE-3 2.
TSP TYPE-3 3.
TSP TYPE-3 4.
TSP TYPE-3 6.
TSP TYPE-3 7.
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RESULT 13
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NU4M_ACACA STAND....

Q37375;

15-JUL-1998 (Rel. 36, Created)

15-JUL-1998 (Rel. 36, Last sequence update)

30-MAY-2000 (Rel. 39, Last annotation update)

30-MAY-2000 (Rel. 39, Last annotation update)
                                                                             CTPG_MYCTU STANDARL
Q10866;
01-OCT-1996 (Rel. 34, C
15-JUL-1999 (Rel. 38, L
16-OCT-2001 (Rel. 40, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        castellanii: complete sequence, gene content and genome organization.";
J. Mol. Biol. 245:522-537(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-ATCC 30010 / NEFF;
MEDLINE-95147275; PubMed-7844823;
Burger G., Plante I., Lonergan K.M., Gray M.W.;
"The mitochondrial DNA of the amoeboid protozoon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACACA
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                                                    15-JUL-1999 (Rel. 38, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Probable cation-transporting ATPase G (EC 3 CTPG OR RV1992C OR MT2048 OR MTCY39.27.
                                                                                                                                                                                                                                                                                                                                  Oxidoreductase; NAD; Ubiquinone; Mitochondrion. SEQUENCE 497 AA; 57768 MW; 9C0B637E65C0F3B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota;
Actinomycetales;
NCBI_TaxID=1773;
                        Mycobacterium tuberculosis.
Bacteria; Firmicutes; Actinobacteria;
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PRINTS; PR01437; NUOXDRDTASE4.
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                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; U12386; AAD11826.1;
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IPR001750; Oxidored_q1.
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                                                                                                                                     STANDARD;
             Corynebacterineae;
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62.5%;
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Pred. No.
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Pred. No.
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             Mycobacteriaceae;
                                                                 update)
(EC 3.6.
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                           Actinobacteridae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed. Usage by and for commodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           laboratory strains.";
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: ATP + H(2)O - ADP + PHOSPHATE.
-!- SUBCELLULAR LOCATION: Integral membrane protein.
-!- SIMILARITY: BELONGS TO THE CATION TRANSPORT ATPASES FAMILY (E1-E2 ATPASES). SUBFAMILY IB.
                                                                                                                                                                                                                                                SEQUENCE
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PROSITE; PS00154; ATPASE_E1_E2;
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Fleischmann R.D., Alland D., Eisen J.A., Carpenter L., White O.,
Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft D., Hickey E.,
Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.D., Salzberg
Belcher A., Utterback T., Weidman J., Khouri H., Gill J., Mikula
                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
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InterPro; IPR001757; E1-E2_ATPase.
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Whole genome comparison of Mycobacterium tuberculosis clinical and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bishai W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nature 393:537-544(1998).
377 CIARPLVP 384
                                                     1 CISVPLVP 8
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PF00122; E1-E2_ATPase; 1.
PF00702; Hydrolase; 1.
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75.0%;
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MAGNESIUM (BY SIMILARITY).
31281C919CC116CA CRC64;
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AC P33537;
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                                                                                                          PSTA_DICDI STANDARD; PRT; 1046 AA. P11976; P11976; O1-OCT-1989 (Rel. 12, Created) O1-OCT-1989 (Rel. 12, Last sequence update) O1-MAR-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00116; DNA_POLYMERASE_B; 1.
Transferase; DNA directed DNA polymerase; DNA replication;
DNA-binding; Plasmid; Mitochondrion.
SEQUENCE 1021 AA; 119075 MW; 54B9A4C51CF5FE3A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its most by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                   Eukaryota;
                                                                                                Prestalk protein precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR002064; DNA_pol_B.
PRINTS; PR00106; DNAPOLB.
SMART; SM00486; POLBC; 1.
                                NCBI_TaxID=44689;
                                                                 Dictyostelium discoideum (Slime mold).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X55361; CAA39046.1; -. PIR; S26985; S26985.
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Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Probable DNA polymerase (EC 2.7.7.7).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Court D.A., Bertrand H.;
                                                                                                                                                                                                                                                                     670
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Curr. Genet. 22:385-397(1992).
-i- CATALYTIC ACTIVITY: N deoxynucleoside triphosphate - N diphosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Genetic organization and structural features
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=93046810; PubMed=1423726;
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 EQUENCE FROM N.A.
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SIMILARITY: BELONGS TO DNA POLYMERASE TYPE-B FAMILY. STRONG,
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                                                Dictyosteliida; Dictyostelium
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Pred. No. 1.7e+02;
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of Neurospora
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDINE-87257883; PubMed-3600646;
Agres K., Neuman W., Rowekamp W.G., Chung S.;
"Developmental regulation of DNase I-hypersensitive sites in Dictyostelium discoideum.";
MOI. Cell. Biol. 7:1823-1829(1987).
-!- INDUCTION: BY THE PUTATIVE STALK-SPECIFIC MORPHOGEN DIF (DIFFERENTIATION INDUCING FACTOR).
-!- SIMILARITY: THE REPEATED SEQUENCES ARE HIGHLY HOMOLOGOUS REPEAT OF THE PDD63 MRNA OF DICTYOSTELIUM DISCOIDEUM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nictyrb; DD03006; ecmB.
Dictyrb; DD03006; ecmB.
InterPro; IPR001673; S_mold_repeat.
Pfam; PF00526; S_mold_repeat; 42.
ProDom; PD006869; S_mold_repeat; 38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Structural and functional characterization of a Dictyostelium gene encoding a DIF inducible, prestalk-enriched mRNA sequence."; Nucleic Acids Res. 15:7463-7476(1987).
REPEAT
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DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=AX2;
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Pred. No. 1.7e+02;
Pred. No. 1.7e+03;
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                                                               F9D6C04FD7D85818 CRC64;
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Search completed: June 17, 2002, 16:24:33 Job time: 1562 sec

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P91378 caenorhabdi
Q9jy18 neisseria m
Q9jvu6 neisseria m
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## ALIGNMENTS

Q53028 Q53028; Q1-NOV-1996 Q1-NOV-1996 Q1-DEC-2001

(TrEMBLrel. 01, (TrEMBLrel. 01, (TrEMBLrel. 19,

Last sequence update)
Last annotation update)

Created)

PRELIMINARY;

PRT;

342 B

REDUCTASE

Rhodococcus corallinus.
Rhodococcus corallinus.
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Corynebacterineae; Gordoniaceae; Gordonia.

NCBI\_TaxID=36822;

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Query Match
Best Local Similarity
                                                                                                                                                                                                 cluster encoding alkene momnoxygenase.";

J. Ferment. Bioeng. 78:339-406(1994).

-!- COFACTOR: BINDS A 2FE-2S CLUSTER (BY SIMILARITY).

EMBL; D37875; BAA07115.1;

HSSP; P23486; 10FJ.
                                                                                                                                      InterPro; IPR000564; ZFe2S_ferredoxin.
InterPro; IPR001834; Cyt_B5_reductase.
InterPro; IPR001041; Ferredoxin.
InterPro; IPR001433; Oxidored_FAD.
InterPro; IPR001221; Phe_hydroxylase.
                                                Iron-sulfur.
SEQUENCE 342 AA;
                                                                                                  Pfam; PF00970; FAD_binding_6; 1.
Pfam; PF00111; fer2; 1.
Pfam; PF00175; NAD_binding; 1.
                                                                                                                                                                                                                                                                   Saeki H., Furuhashi K.;
"Cloning and characterization of a Nocardia corallina B-276 gene
                                                                                                                                                                                                                                                                                               STRAIN=B-276;
                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                         PRINTS; PRO0410; PHEHYDRXLASE. PROSITE; PS00197; 2FE2S_FERREI
                                                                           PS00197; 2FE2S_FERREDOXIN; 1.
                                                   37282 MW; 4651F38D116A8049 CRC64;
 78.8%;
77.8%;
  Score 41; DB 2; Pred. No. 6.4;
             Length 342;
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80 154 198 551 562 1015 3623 3623 287 287 407

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Q9QY31 025921 Q93368

Q96736

Q966C5 Q9VN94 022243 070244

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Q9ZIY6 5 Q9PFZ3 030782

Q9ziy6 borrelia bu Q9pfz3 xylella fas Q30782 chlamydophi Q966c5 caenorhabdi

O9vn94 drosophila
O22243 arabidopsis
O702244 rattus norv
O9qy31 mus musculu
O25921 helicobacte

Q93368 caenorhabdi Q96736 fowl adeno

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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P91378 PRELIMINARY; PR
P91378; PRELIMINARY; PR
P91378; Orea
01-MAY-1997 (TrEMBLrel. 03, Last
01-DEC-2001 (TrEMBLrel. 19, Last
HYPOTHETICAL 33.8 KDA PROTEIN.
     "The sequence of C. elegans cosmid K12D9."; Submitted, (JAN-1997) to the EMBL/GenBank/DDBJ databases.
                                                                        Graves T.
                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                  "Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                      STRAIN=BRISTOL N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
                                                                                               STRA (N-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPRO02048; EF-hand.
InterPro; IPRO03575; Small_GTPase.
SMART; SM00010; Small_GTPase; 1.
PROSITE; PS00018; EF-HAND; UNKNOWN_2.
SEQUENCE 648 AA; 73066 MW; D22FD2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lin X., Kaul S., Town C.D., Benito M., Creasy T.H., Haas B., Wu D. Ronning C.M., Koo H., Fujil C.Y., Utterback T.R., Barnstead M.E., Bowman C.L., White O., Nierman W.C., Fraser C.M.; "Arabidopsis thaliana chromosome III BAC T12H1 genomic sequence."; Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases.
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01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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66.7%;
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Last annotation updat
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Pred. No.
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18;
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ID Q9JVU6
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Q9JY18
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, 90Ar60
097Ang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tettelin H., Saunders N.J., Heidelberg J., Jeffries A.C., Nelson K.E. Eisen J.A., Ketchum K.A., Hood D.W., Pederson J.F., Dodson R.J., Nelson W.C., Gwinn M.L., DeBoy R., Peterson J.D., Hickey E.K., Haft D.H., Salzberg S.L., White O., Fleischmann R.D., Dougherty B.A., Mason T., Ciecko A., Parksey D.S., Blair E., Cittone H., Clark E.B., Cotton M.D., Utterback T.R., Khouri H., Qin H., Vamathevan J., Gill J., Scarlato V., Masignani V., Pizza M., Grandi G., Sun L., Smith H.O., Fraser C.M., Moxon E.R., Rappuoli R., Venter J.C., "Complete genome sequence of Neisseria meningitidis serogroup B strai
                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000706; AGPR_act_site.
InterPro; IPR000534; Semialdh_dh.
Pfam; PF011118; Semialdhyde_dh; 1.
Pfam; PF02774; Semialdhyde_dhc; 1.
ProDom; PD003765; AGPR_act_site; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Science 287:1809-1815(2000).
EMBL; AE002528; AAF42126.1;
TIGR; NMB1787; -.
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STRAIN=WC58 / SEROGROUP B;
MEDLINE=20175755; Pubmed=10710307;
                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; 080030; AAG24161.1; -
InterPro: IPR000276; GPCR_Rhodpsn.
PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
Hypothetical protein.
SEQUENCE 297 AA; 33823 MW; C300EDA72169ADBD CRC64;
                                                                                                                                                            156 CVSLPLVP 163
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SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
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les 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                          347 AA;
                                                                                                                                                                                                                                                                        Conservative
                       PRELIMINARY;
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75.0%;
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Pred. No. 15;
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Pred. No. 13;
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                    347 AA
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                                                                                                                                                                                                                                                                                                                      16; Length 347;
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Nelson K.E.,

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Best Local
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                                                                                                         Matches
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Q9ZIY5;
Q9ZIY6;
Q1-MAY-1999 (TrEMBLrel. 10, Created)
Q1-MAY-1999 (TrEMBLrel. 10, Last sequence update)
Q1-MAY-1999 (TrEMBLrel. 10, Last annotation update)
HYPOTHETICAL 9.2 KDA PROTEIN
BOTTelia burgdorferi (Lyme disease spirochete).
Bacteria; Spirochaetales; Spirochaetaceae; Borrelia
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SEQUENCE FROM N.A.
STRAIN-22491 / SEROGROUP A / SEROTYPE 4A;
STRAIN-22491 / SEROGROUP A / SEROTYPE 4A;
MEDLINE-20222556; PubMed-10761919;
Parkhill J., Achtman M., James K.D., Bentley S.D., Churcher C.,
Parkhill J., Achtman M., James K.D., Bentley S.D., Churcher C.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Basham D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James K.D., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James M., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James M., Brown D., Chillingworth T.,
Parkhill J., Achtman M., James M., Brown D., Chillingworth T.,
Parkhill J., Basham D., Brown D., Chillingworth T.,
Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M., Parkhill M.,
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
PUTATIVE N-ACETYL-GAMMA-GLUTAMYL-PHOSPHATE REDUCTASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Klee S.R., Morelli G., Basham D., Brown D., Chillingworth T.,
Davies R.M., Davis P., Devlin K., Feltwell T., Hamlin N., Holroyd
Jagels K., Leather S., Moule S., Mungall K., Quail M.A.,
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Nature 404:502-506(2000).
EMBL; AL162753; CAB83963.1;
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InterPro; IPR000534; Semialdh_dh.
Pfam; PF01118; Semialdhyde_dh; 1.
Pfam; PF02774; Semialdhyde_dhC; 1.
ProDom; PD003765; AGPR_act_site; 1.
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SEQUENCE 347 AA;
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*G5 c
                                                                                                                                                                                                                                                                                     "G5 clone from Borrelia burgdorferi.";
Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases
EMBL; AF005056; AAD01230.1; -
                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-N40
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                        Hypothetical protein. SEQUENCE 80 AA; 9171 MW;
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  CISVPLYP 47
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beta subdivision; Neisseriaceae; Neisseria.
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                                                                                                                                     Score 38;
Pred. No.
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01-OCT-2000
01-OCT-2000
01-DEC-2001
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01-JAN-1998 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                      Bacteria; Chlamydiales; NCBI_TaxID=83557;
                                                                           Chlamydophila caviae
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                                                            Chlamydiaceae; Chlamydophila
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Pred. No. 11;
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Q9VN94;
01-MAY-2000 (TrEMBLrel. 13,
01-MAY-2000 (TrEMBLrel. 13,
01-MAY-2000 (TrEMBLrel. 13,
                                                                                                                                                                                                                        "Direct Submission.";
Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AC006729; AAK84599.1; -.
SEQUENCE 551 AA; 63939 MW; 73BAD1C7DF1EB56F CRC64;
                                                                                                                                                                                                                                                                                                                            STRAIN-BRISTOL N2;
Cordes M., Wohldmann P.;
"The sequence of C. elegans
Submitted (MAR-1999) to the
                                                        Q9VN94
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
HYPOTHETICAL PROTEIN Y24D9A.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bannantine J.P., Rockey D.D., Hackstadt T.;
"Tandem genes of Chlamydia psittaci that encode proteins localized the inclusion membrane.";
Mol. Microbiol. 28:1017-1026(1998).
EMBL; AF017105; AAC46378.1;
SEQUENCE 198 AA; 20917 MW; 455E5EA09444FE29 CRC64;
                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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Science 282:2012-2018(1998).
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MEDLINE-99069613; PubMed-9851916;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caenorhabditis elegans
                                                                                                                  260 CSSKPIVPC 268
                                                                                                                                                                                                                                                                                                                                                                                                              "Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=98326820; PubMed=9663687;
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Last sequence update)
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                                                                                                                                                              Score 38; DB
Pred. No. 37;
1; Mismatches
                                                                                                                                                                                                                                                                                                                            cosmid Y24D9A.";
EMBL/GenBank/DDBJ databases.
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Pred. No.
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RESULT
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ID 022
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DT 01-
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RA Baleson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Berson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
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RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
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RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Serriac C., Center A., Chandra I.,
RA Glodek A., Gong F., Gornell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Katchi A.E., Gary N.S., Gelbart W.M., Glasser K.,
RA Liu X., Mattei B., McIntosh T.C., Wei M.-H., Ibayewan C.,
RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.L.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Merkalov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
Nelson D.R., Mulshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Wang E., Syradling A.C., Stapleton M., Skupski M.P., Shhen H.,
RA Wang E. Y., Wassarman D.A., Wentstock G.M., Weissenbach J.,
RA Wang S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Jenny X.H., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Schens P., Sand M., Woodage T., Worley K.C., Wu D., Yang S., Y
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                                     01-DEC-2001 (TIEMBLIER. 11, Last sequence update)
PUTATIVE ATP-DEPENDENT RNA HELICASE A.
AT2G47680.
                                                                                                                                      01-JAN-1998 (TrEMBLrel. 05, 01-AUG-1999 (TrEMBLrel. 11, 01-DEC-2001 (TrEMBLrel. 19)
                                                                                                                                                                                                                                                                                                       022243;
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
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Pred. No.
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Arabidopsis thaliana (Mouse-ear cress)

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Best Local S
Matches 6
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070244;
01-AUG-1998 (TrEMBLrel. 07, Created)
01-AUG-1998 (TrEMBLrel. 09, Last sequence
01-DEC-2001 (TrEMBLrel. 19, Last annotat:
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                                       "The intrinsic factor-vitamin B12 receptor and target of teratoge antibodies is a megalin-binding peripheral membrane protein with homology to developmental proteins.";
J. Biol. Chem. 273:5235-5242(1998).
-!- SIMILARITY: CONTAINS 26 CUB DOMAINS.
EMBL: AF022247; AAC71661.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00271; helicase_C; 1.
Pfam; PF00642; zf-CCCH; 2.
SMART; SM00487; DEXDC; 1.
SMART; SM00490; HELICC; 1.
SMART; SM00356; ZnF_C3H1; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (MAR-2000) to the EMBL
EMBL; AC005309; AAC63624.1; -.
InterPro: IPR001410; DEAD.
InterPro: IPR001650; HeLicase_C.
InterPro: IPR000571; Zf-CCCH.
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                                                                                                                                                                                                                 Eukaryota; Métazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat NCBI_TaxID-10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATP-binding; Herror 1015 AA;
                                                                                                                                                                          SEQUENCE FROM N.A. meDLINE=98148073; PubMed=9478979;
                                                                                                                                                                                                                                                                                                                                                                  070244
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MEDLINE=20083487; PubMed=10617197;
                                                                                                                              Rasmussen H.H., Brault D., Pontillon Hammond T.G., Verroust P.J.;
                                                                                                                                                        Moestrup S.K., Kozyraki R.,
                                                                                                                                                                                                                                                             Rattus norvegicus (Rat).
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                                                                                                                                                                                                                                                                                                                                                                                                                                          676
 InterPro; IPR000859;
                interPro;
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les 6; Conserv
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| CVSVPFVP 683
                              P00740; 1EDM
                  IPR000152;
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75.0%;
 Asx_hydroxyl
                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                             Kristiansen M.,
Pontillon F., Gov
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Pred. No.
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66;
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Goda F.O., Chri
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RESULT
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Best Local
Query Match
Best Local Similarity
Matches 6; Conserv
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InterPro; IPRO00742; EGF_2.
InterPro; IPRO1081; EGF_Ca.
Pfam; PF000431; CUB; 27.
Pfam; PF000481; EGF; 7.
SMART; SM001042; CUB; 26.
SMART; SM00179; EGF_CA; 4.
SMART; SM00001; EGF_Like; 4.
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Q9QY31;
01-MAY-2000
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PROSITE; PS01180; CUB; 27.

PROSITE; PS01022; EGF_1; UNKNOWN_4.

PROSITE; PS01186; EGF_2; 2.

PROSITE; PS01187; EGF_CA; 4.

Calcium-binding; EGF-1ke domain; Glycoprotein; Hydroxylation; Receptor; Repeat; Signal.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
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                                                                                                                      PRINTS; PRO0048; ZINCFINGER.

SMART; SM00355; ZNF_CZH2; 5.

PROSITE; PS00080; MULTICOPPER OXIDASE2; 1.

PROSITE; PS00028; ZINC_FINGER_C2H2_1; 4.

PROSITE; PS00157; ZINC_FINGER_C2H2_2; 5.

DNA-binding; Metal-binding; Nuclear protein; Zin DNA-binding; Metal-binding; Nuclear Protein; Zin SEQUENCE 287 AA; 31636 MW; 02E42A6FE8BAFD48
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                             HSSP; P15822; 1BBO.
MGD; MGI:1353563; Zfp293.
InterPro; IPR000355; MultiCu_c
InterPro; IPR000822; Znf-C2H2
Pfam; PF00096; Zf-C2H2; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SUBCELLULAR LOCATION: N
EMBL; AF133714; AAF22956.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
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3623 AA;
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75.0%;
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Score 37; DB Pred. No. 30; 2; Mismatches
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Pred. No. 2.2e+02
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INTRINSIC FACTOR-B12
MW; 39FB792AC6545240
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01-FEB-1997 (TrEMBLrel. 02,
01-JAN-1998 (TrEMBLrel. 05,
01-DEC-2001 (TrEMBLrel. 19,
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InterPro; IPR001091; N4_MTase.
InterPro; IPR002941; N6_N4_Mtase.
InterPro; IPR002941; N6_N4_Mtase.
InterPro; IPR002941; N6_N4_Mtase.
InterPro; IPR002941; N6_N4_Mtase.
IPR01555; N6_N4_Mtase; 1.
PRINTS; PR00506; D21N6MTFRASE.
PRINTS; PR00508; S21N4_MTFRASE.
PROSITE; PR00093; N4_MTASE; UNKNOWN_1.
Hypothetical protein; Complete proteome.
Hypothetical protein; Complete Proteome.
SEQUENCE 287 AA; 33516 MW; 912B987A6ADA0653 CRC64;
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STRAIN-26695 / ATCC 700392;

MEDLINE-97394467; PubMed-9252185;

Tomb J.-F., White O., Kerlavage A.R., Clayton R.A., Sutton G.G.,

Tomb J.-F., White O., Kerlavage A.R., Clayton R.A., Dougherty B.A.,

Reison K., Quackenbush J., Zhou L., Kirkness E.F., Peterson S.,

Nelson K., Quackenbush J., Dodson R., Khalak H.G., Glodek A.,

Loftus B., Richardson D., Dodson R., Khalak H.G., Glodek A.,

Loftus B., Richardson D., Dodson R., Khalak H.G., Glodek A.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., FitzGerald L.M., Lee N., Adams M.D., Hickey E.K.,

McKenney K., Borodovsky M., Karp P.D., Smith H.O., Fraser C.M.,

Wenter J.C.,

McKenney K., Borodovsky M., Karp P.D., Smith H.O., Fraser C.M.,
   SEQUINCE FROM N.A.
Stewdrd C.A.;
Stewdrd C.A.;
Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases
[2]
                                                                                                                                                                                                      Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
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C41G7.4.
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Nature 388:539-547(1997).
EMBL; AE000637; AAD08412.1; -.
TIGR; HP1368; -.
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O25921; PTEMBLED 05,
01-JAN-1998 (TrEMBLED 05,
01-JAN-1998 (TrEMBLED 05,
01-DEC-2001 (TrEMBLED 19,
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Bacteria; Proteobacteria; epsilon subdivision; Hellcobacter group;
Hellcobacter.
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01-JAN-1998 (TremBirel. 05, Last sequence update)
01-DEC-2001 (TremBirel. 19, Last annotation update)
TYPE IIS RESTRICTION ENZYME M2 PROTEIN (MOD).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "The complete genome sequence of the gastric pathogen Helicobacter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=210;
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Matches 6
                                                                                                          InterPro; IPR001214; SET.
Pfam; PF00856; SET; 1.
SMART; SM00317; SET; 1.
PROSITE; PS50280; SET; 1.
SEQUENCE 407 AA; 46221 MW; B275994433254520 CRC64;
                                                                                                                                                                     investigating biology.";
Science 282:2012-2018(1998).
-!- SIMILARITY: CONTAINS 1 SET DOMAIN.
EMBL; Z81048; CAB02841.1; -.
                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                    "Genome sequence of the nematode C.elegans: A platform for investigating biology.":
                                                                                                                                                                                                                                           none;
113 CSSNPIVPC 121
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             1 CISVPLVPC 9
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0;

Search completed: June 17, 2002, 16:23:47 Job time: 1621 sec

GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd

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Result
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Chlamydia psittaci
                                                        Human
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VEGF based monocyc
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161	118	109	67	61	11	1550	1512	1512	706	565	565	565	532	521	482	372	370	353	313	309	287	251	249	249	249	200	120	56	11	65	64	3623	562
22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	21	22	22	21	22	21	22	22	19	22	22	20	22	20	21	20	22
ABB44230	AAU39981	ABG12918	AAU40341	AAM90405	AAU04543	AAM79716	AAU04349	AAM78732	AAB94174	AAB92822	ABG11291	ABG11289	ABG14722	ABG07432	ABG03166	AAU10067	AAB32774	AAU10068	AAU25556	AAB33232	AAU25559	AAB41885	AAU12226	AAU09180	AAW79090	ABG03676	AAM93613	AAW85729	AAU04544	AAY12860	AAG00458	AAY27020	ABB57779
Peptide #11736 enc	Propionibacterium	Novel human diagno	Propionibacterium	Human immune/haema	VEGF based monocyc	Human protein SEQ	Mammalian toxicolo			Human protein sequ	Novel human diagno		_	human	Novel human diagno	Chemokine receptor	Eucalyptus grandis	Chemokine receptor	Human G Protein-Co	Eucalyptus grandis	Human G Protein-Co	Human ORFX ORF1649	PRO1884	Human PRO1884 poly	secreted	Novel human diagno	-	Novel protein (Clo	VEGF based monocyc	Human 5' EST secre	ret	2	Drosophila melanog

## ALIGNMENTS

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Human; VEGE; vascular endothelial growth factor; angiogenesis; neovascularisation; lymphanglogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic. Achen MG, (LUDW-) LUDWIG INST CANCER RES 18-JAN-2000; 2000US-0176293. 16-MAY-2000; 2000US-0204590. 18-JAN-2001; 2001WO-US01533 26-JUL-2001. WO200152875-A1. Disulfide-bond Synthetic. VEGF based monocyclic peptide 11. 26-SEP-2001 (first entry) Hughes RA, Stacker S, Location/Qualifiers 1..9 /note= "This bond cyclises the peptide" Cendron

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RESULT
AAU04532
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence represents a monomeric monocyclic peptide of the invention, CC whose 3-dimensional structure is modelled on the expose loop of human CC WEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring CC beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein CC and cyclising the peptides by oxidising the cysteine residues. The CC monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked CC monocyclic peptides) and a cyclic peptide with at least one amino acid CC deleted prior to cyclisation are used to interfere with angiogenesis, CC neovascularisation or lymphangiogenesis in a mammal with a condition CC characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psoriasis, arthropathy, CC rerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance-induced neovascularisation of the liver, excessive commone-related angiogenic dysfunction, diabetes induced neovascular sequelae, or chronic liver confection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid CC complature. The monomeric and bicyclic peptides are used to interfere CC with at least one biological activity induced by VEGF. VEGF-C or -D and CC chronic inflammation, especially rheumatoid arthritis, psoriasis and CC chronic sequelation, especially rheumatoid arthritis, psoriasis and CC chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                   neovascularisation; lymphangiogenesis; psoriasis; tumour;
diabetes induced neovascular sequelae; rheumatoid arthritis;
26-JUL-2001
                                                                                                                                                   Synthetic
                                                                                                                                                                                  diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                              Human; VEGF;
                                                                                                                                                                                                                                                                             VEGF based monocyclic peptide 10.
                                    WC200152875-A1
                                                                                          Disulfide-bond
                                                                                                                                                                                                                                                                                                                       26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                         AAU04532 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diabetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                    vascular endothelial growth factor; angiogenesis;
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                                                                                                                                                                                                                                                                                                                   (first entry)
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                                                                                                          Location/Qualifiers
                                                                   /note= "This bond cyclises the peptide"
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AAU04526
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Best Local Similarity
Themes 9; Conserv
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Human; VEGF; vascular endothelial growth factor; anglogenesis; neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                      VEGF based monocyclic peptide
                                                                                                                                                                       26-SEP-2001
                                                                                                                                                                                                                                                                AAU04526 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diabetic retinopathy.
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16-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Achen MG, Hughes RA,
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2000US-0204590.
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90.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 41.5;
Pred. No. 1;
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RESULT
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CC characterised by angiogenesis, neovascularisation or lymphangiogenesis. CC The condition is diabetic retinopathy, psoriasis, arthropathy.
CC chemangioma, vascularised malignant or benign tumour, post-recovery condition accident, post-angioplasty restenosis, head, heat or cold crauma, substance-induced neovascularisation of the liver, excessive condition. The peptides are also used to modulate vascular permeability of in amammal (the mammal has a condition characterised by fluid accumulature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -p and conversed to interfere also used in combination with an anti-inflammatory agent, to treat a converse contrains and accombination with an anti-inflammatory agent, to treat a converse contrains and accombination with an anti-inflammatory agent.
                                                                                                                                                                                      Matches
                                                                                                                                                                                                              Query Match
Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 49; Page 32; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -
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16-MAY-2000; 2000US-0204590
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                                                                                                                                                                                                                                                                                        Sequence
                    AAR66216 standard; Protein; 342 AA
                                                                                                                                                                                                                                                                                                                                              chronic inflammation,
                                                                                                                                                                                          Local Similarity 81.
                                                                                                            1 CISVPL--VPC 9
|||||| |||
1 cisvpltsvpc 11
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                                                                                                                                                                                                            78.8%;
81.8%;
                                                                                                                                                                                                                                                                                                                                              especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stacker S,
                                                                                                                                                                                          Score 41; DB Pred. No. 1.4; O; Mismatches
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RESULT
AAR81472
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                                                                                                                                                                                                                                                                                                                                                                                                                     E.coli transformed with the DNA sequence AAQ79569 are able to catalyse the epoxidation of alkenes. The DNA is derived from Nocardia corallina and comprises 4 open reading frames. ORFs amoA and amoC encode subunits 1 and 2 of the alkene monoxygenase enzyme and ORF amoD encodes a reductase capable of transferring electrons
                                                                                                                                            Alkene mono-oxygenase; ir microbial oxidation; dye.
                                                                                                                                                                                               07-AUG-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 2; Page 4-5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alkene mon:oxygenase and corresp. gene - epoxidation of an alkene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1995-009069/02.
N-PSDB; AAQ79569.
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                                                           08-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (NIHA ) JAPAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-APR-1993;
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                                                                                30-JAN-1996
                                                                                                     JP08023988-A
                                                                                                                         Nocardia corallina B-276
                                                                                                                                                                            Nocardia corallina alkene mono-oxygenase gene product, amoD
                                                                                                                                                                                                                                          AAR81472 standard; Protein; 342 AA.
                                                                                                                                                                                                                                                                                                                                                                                                             from NADH coenzyme to a monoxygenase.
                 (NIHA ) JAPAN ENERGY CORP
                                       08-JUL-1994;
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                                                                                                                                                                                                                                                                                            75 casvplepc
                                                                                                                                                                                                                                                                                                                 1 CISVPLVPC
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                                       94JP-0179688
                                                            94JP-0179688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30pp; Japanese.
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                                                                                                                                                                                                                                                                                                                                                 78.8%;
77.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  reductase; epoxidation; amoD
                                                                                                                                                        indole;
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                                                                                                                                                        indigo production; biosynthesis;
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                                                                                                                                                                                                                                                                                                                                                           Length 342;
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RESULT AAU04545
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XX DEEP VEGF
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KW neov
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XX OS Synt
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PR 18-;
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PR 16-,
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                                                                                                                                                                                                                                                                                                                                                                                               18-JAN-2000; 2000US-0176293.
16-MAY-2000; 2000US-0204590.
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diabetes induced neovascular sequelae; rheumatoid arthritis;
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                    Example 25; Page 47; 102pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      diabetic retinopathy; chronic inflammation; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU04545 standard; Peptide; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prepn. of indigo by a microbiological method - by culturing a microbe having alkene monooxygenase activity to oxidise indole to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 5; Page 8-9; llpp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 by microbial oxidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAT17418
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                                                                                                                                                                                                                                                                                     MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
7; Conserv
                                                                                                                                                                                                                                                                                     Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "This bond cyclises the peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78.8%;
77.8%;
                                                                                                                                                                                                                                                                                  Stacker S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 41;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                  Cendron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 17;
41;
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                                                                                                       a peptide
1 by
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC VEGFD (vascular endothelial growth factor). The invention relates to a CC method of producing a monomeric monocyclic peptide by a measuring CC beta-beta carbon separation distances on opposite antiparallel strands of CC a peptide loop fragment from an exposed loop of a growth factor protein CC and cyclising the peptide by oxidising the cysteine residues. The CC monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked CC monocyclic peptides) and a cyclic peptide with at least one amino acid CC deleted prior to cyclisation are used to interfere with anglogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition CC characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetto retinopathy, psoriasis, atthropathy, CC hemangioma, vascularised malignant or benign tumour, post-recovery CC cerebrovascular accident, post-angioplasty restenosis, head, heat or cold trauma, substance induced neovascularisation of the liver, excessive componer related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid cacumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and carbonic inference and a combination with an anti-inflammator, to treat and carbonic information accombination with an anti-inflammator, to treat and carbonic information and combination with an anti-inflammator.
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Best Local
                                                                                                                                                                                                                                                                                                                                                                             neovascularisation; lymphangiogenesis; psoriasis; tumour; diabetes induced neovascular sequelae; rheumatoid arthritis; diabetic retinopathy; chronic inflammation; cyclic.
    Achen MG,
                                           (LUDW-) LUDWIG INST CANCER RES
                                                                                18-JAN-2000;
16-MAY-2000;
                                                                                                                                            18-JAN-2001; 2001WO-US01533
                                                                                                                                                                                   26-JUL-2001
                                                                                                                                                                                                                           WO200152875-A1
                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; VEGF; vascular endothelial growth factor; angiogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEGF based monocyclic peptide 20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU04542 standard; Peptide; 11 AA
                                                                                                                                                                                                                                                                                    Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chronic inflammation, especially rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequence represents a monomeric monocyclic peptide of the invention, whose 3-dimensional structure is modelled on the expose loop of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity nes 8; Conserv
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| cvsvplttvpc
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  Hughes RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                2000US-0176293
2000US-0204590
                                                                                                                                                                                                                                                         /note= "This bond cyclises the peptide"
                                                                                                                                                                                                                                                                                      Location/Qualifiers
1..11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76.98;
72.78;
Stacker S,
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Pred. No.
Cendron A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
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RESULT

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1D AAM(6501

AC AAM(1000)

AC AAM(100
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Best Local Similarity
"hes 8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hormone-related angiogenic dysfunction, diabetes induced neovascular sequelae, hypertension induced neovascular sequelae, or chronic liver infection. The peptides are also used to modulate vascular permeability in a mammal (the mammal has a condition characterised by fluid accumulation in peripheral limbs or in lungs, peritoneal cavity, pleura, or brain. The peptides are used to image blood vessels and lymphatic vasculature. The monomeric and bicyclic peptides are used to interfere with at least one biological activity induced by VEGF, VEGF-C or -D and are also used in combination with an anti-inflammatory agent, to treat a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    beta-beta carbon separation distances on opposite antiparallel strands of a peptide loop fragment from an exposed loop of a growth factor protein and cyclising the peptide by oxidising the cysteine residues. The monocyclic peptides, dimeric bicyclic peptides (comprising 2 linked monocyclic peptides) and a cyclic peptide with at least one amino acid deleted prior to cyclisation are used to interfere with angiogenesis, neovascularisation or lymphangiogenesis in a mammal with a condition characterised by angiogenesis, neovascularisation or lymphangiogenesis. The condition is diabetic retinopathy, psociasis, arthropathy, hemangioma, vascularised malignant or benign tumour, post-recovery cerebrovascular accident, post-angioplasty restensis, head, heat or columns.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel monomeric monocyclic peptide, used to interfere with angiogenesis, or lymphangiogenesis, is produced by cyclising a peptide loop fragment from an exposed loop of a growth factor protein by oxidizing the cysteine residues -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            whose 3-dimensional structure is modelled on the expose loop of human VEGFD (vascular endothelial growth factor). The invention relates to a method of producing a monomeric monocyclic peptide by a measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-442248/47.
                                                                                                                                                                                                                                                                                                        gene therapy; antisense therapy; cancer; immune disor
growth disorder; osteoporosis; thrombolytic disorder;
                                                                                                                                                                                                                                                                                                                                            nootropic; neuroprotective; thrombolytic; osteopathic; an
gene therapy; antisense therapy; cancer; immune disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                Human; foetal protein; cytostatic; immunosuppressive; immunostimulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM06501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAM06501 standard; Protein; 101 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diabetic retinopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chronic inflammation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cerebrovascular accident, post-angioplasty restenosis, head, heat or trauma, substance-induced neovascularisation of the liver, excessive
   25-JAN-2001; 2001WO-US02723.
                                                                   02-AUG-2001.
                                                                                                                                       WO200155339-A2
                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                     nervous system disorder; inflammation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 clsvpltsvpc 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             foetal protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11
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72.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  especially rheumatoid arthritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ب</u>
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    232.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 22;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
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Best Local
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15-SEP-2000;
06-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to novel foetal polypeptides encoded by polynucleotides comprising one of 477 sequences fully defined in the specification. The foetal polynucleotides and polypeptides are useful in the treatment and diagnosis of diseases such as cancers, immune disorders, growth disorders (e.g. osteoporosis), thrombolytic disorders, nervous system disorders and inflammation. The present sequence is a polypeptide encoded by a cDNA assembled using an expressed sequence tag (EST) found to be expressed in human foetal tissue cDNA libraries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 10; Page 264; 715pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel fetal proteins useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAH94176.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC
          N-PSDB; AAS86587
                     WPI; 2001-639362/73
                                         Drmanac
                                                                                  31-MAR-2000; 2000US-0540217
23-AUG-2000; 2000US-0649167
                                                                                                                 30-MAR-2001; 2001WO-US08631
                                                                                                                                      11-OCT-2001
                                                                                                                                                            WO200175067-A2
                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                   Human; chromosome mapping; gene mapping; gene therapy;
food supplement; medical imaging; diagnostic; genetic d
                                                                                                                                                                                                                                   Novel human diagnostic protein #22391.
                                                                                                                                                                                                                                                         18-FEB-2002
                                                                                                                                                                                                                                                                              ABG22400;
                                                                                                                                                                                                                                                                                                ABG22400 standard; Protein;
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Asundi V,
                                         RT,
                                                             HYSEQ INC
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2000US-0663870.
2000US-0707351.
                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                         Liu C,
                                                                                                                                                                                                                                                        (first entry)
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Zhou P,
                                                                                                                                                                                                                                                                                                                                                                                                         75.0%;
                                         Tang
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P, Werhman T;
                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                                                                                                                                                                               Score 39; DB
Pred. No. 26;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for the treatment and diagnosis of diseases
                                                                                                                                                                                                                                                                                                                                                                                                0;
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                                                                                                                                                                                                                                                                                                                                                                                                                   Length 101;
                                                                                                                                                                                                     disorder
                                                                                                                                                                                                               forensic;
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RESULT 1
AAY270252
ID AAYX
XX AAY2
AC AAY2
XX CUbi
XX Cubi
KW Coxi
KW Coxi
KW Coxi
KW Prot
XX Pat
XX Pat
XX Cubi
Cox Ratt
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XX Cubi
Cox Ratt
XX Cubi
Cox 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CC and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques (II). (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as a foot supplement. (II) and its binding partners are useful in medical considers involving aberrant protein expression or biological activity. CC The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations considered the rypes of data and products dependent on DNA and CC amino acid sequences. ABG00010-ABG30377 represent novel human cC diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed constitution, but was obtained in electronic format directly from WIPO as ferming and acid sequence and in electronic format directly from WIPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cubilin; epithelial glycoprotein receptor; vitamin B12; endocytosis; toxicity; kidney; spleen; brain; liver; heart; thyroid; abortion; rat; proteinuria; fetal malformation; fetal development; kidney damage; EGF
   New DNA encoding cubilin, used
                                                                         WPA: 1999-479045/40
                                                                                                                                         Hammond TG,
                                                                                                                                                                                                                                                                                                      22-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W09937757-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY27025 standard; Protein; 44 AA
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                                                                                                                                                                                                  (INRM ) INST NAT SANTE & RECH MEDICALE. (TULA ) TULANE EDUCATIONAL FUND.
                                                                                                                                                                                                                                                                                                                                                                      21-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amino acid sequence of rat cubilin EGF5 repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-OCT-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY27025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim
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                                                                                                                                     Verroust PJ;
                                                                                                                                                                                                                                                                                                   98US-0072197.
                                                                                                                                                                                                                                                                                                                                                                   99WO-US01259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75.0%;
87.5%;
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Pred. No. 26;
for treating toxicity, particularly
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Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a rat cubilin protein. Cubilin is a ligand-CC binding, epithelial glycoprotein receptor that facilitates uptake of CC intrinsic factor/vitamin B12 complexes in intestines and kidney. It is CC also involved in endocytosis and trafficking of light immunoglobulin CC chains in renal proximal tubule cells. Host cells containing a vector CC comprising the rat cubilin DNA sequence can be used for the recombinant CC expression of the protein. Cubilin, or its fragments, are used to treat CC or reduce toxicity, particularly in kidneys, spleen, brain, liver, heart CC and thyroid. Cubulin mutations may also be implicated in idiopathic CC proteinuria, fetal malformation, poor fetal development and spontaneous abortions. Cubilin may also be used to raise specific antibodies, used CC for its detection, or clones that express it, in standard immunoassays. CC arguments of cubilin DNA can also be used to detect cubilin mRNA in cell CC arguments of cubilin DNA can also be used to detect cubilin in the urine CC are indicative of kidney damage. Sequences AAY27021-35 represent EGF crepeat sequences of rat cubilin and from homologous regions of other
                                                                                                                                                                                                                                                    20-APR-1998;
21-APR-1998;
22-MAY-1998;
                                                         Claim 1; Page 41-42; 56pp; English.
                                                                                           chlamydial infections
                                                                                                    Novel bacterial infection specific proteins for treating and diagnosing
                                                                                                                                           N-PSDB; AAZ34588
                                                                                                                                                        WPI; 1999-633904/54.
                                                                                                                                                                                                                                                                                                                                                                                                           Chlamydia psittaci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chlamydia psittaci infection-specific protein IncB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-FEB-2000 (first entry)
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                                                                                                                                                                                       Rockey DD,
                                                                                                                                                                                                                     (UYOR-) UNIV OREGON STATE
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                                                                                                                                                                                                                                                                                                                                                                                                                                       IncB; infection; vaccine; therapy; diagnosis
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98US-0082588
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66.78;
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Pred. No.
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This sequence represents novel infection-specific protein IncB of Chlamydia psittaci strain GPIC. IncB is found in the inclusion membrane of infected cells. It is associated primarily with the

It is associated primarily with

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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vegetative reticulate body form of Chlamydia rather than with the refractile elementary body form. The invention includes: a vaccine directed against the reticulate body form of Chlamydia comprising 1 or more infection-specific proteins (see AAY32170-78), including IncA, IncB and IncC; methods of using and producing such a vaccine; methods for detection of infection-specific antibodies or antigens in a biological specimen; and a method of using therapeutic agents specifically directed against infection-specific peptides, or the genes that code for such peptides, to treat chlamydial infection.
                                                                                   The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invent useful in developmental biology and in elucidating cell signalling cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLIG1840-ABLIG175) and the encoded proteins
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                                                                                                                                                                                                     Disclosure; SEQ ID NO 129; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                         23-MAR-2001; 2001WO-US09231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila melanogaster
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster polypeptide SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABB57779;
                                          The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from
                                                                                                                                                                                                                                               New isolated nucleic acid genes from Drosophila and
   Sequence
                                                                                                                                                                                                                                                                                                                                     Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                                                    (PEKE ) PE
                                                                         (ABB57737-ABB72072)
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157 cislpiisc 165
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                              ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                          2001-656860/75
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5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                             2000US-191637P
2000US-0614150
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                                                                                                                                                                                                                                                                                                                                    , DMG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      biology;
                                                                                                                                                                                                                                               detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                     Myers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cell signalling; insecticide;
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74;
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                                                                                                                                                            invention
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RESULT 1
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Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cubilin; epithelial glycoprotein toxicity; kidney; spleen; brain; proteinuria; fetal malformation;
                                                                                                                                                                                                                                                                                                                                                    Modified-site
                                                                                                                                                                                                                                                                                                                                                                                       Protein
                                                                                                                                                                                                                                                                                                                                                                                                                  Key
                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rat cubilin
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          Modified-site
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cvkvpidpc 17
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        /note=
2117
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957
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1307
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1646
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1500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73.1%;
55.6%;
                                                                                                                                                            "potential
                                                                                                                                                                                               "potential N-glycosylation
                                                                                                                                                                                                                                   "potential N-glycosylation site"
                                                                                                                                                                                                                                                                     "potential N-glycosylation site"
                                                                                                                                                                                                                                                                                       "potential N-glycosylation site"
                                                                                                                                                                                                                                                                                                        "potential N-glycosylation
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                                                                                                                                                                                                                                                                                                                                                            "potential N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                             "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                               "endoplasmatic import signal sequence"
"potential N-glycosylation
                 "potential N-glycosylation
                                                                      "potential N-glycosylation site"
                                                                                                       "potential
                                                                                                                                                                             "potential
                                                                                                                                                                                                                 "potential N-glycosylation
                                                                                                                                                                                                                                                    "potential
                                                                                                                                                                                                                                                                                                                                           "potential N-glycosylation site"
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Pred. No. 2.1e
2; Mismatches
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liver; heart; thyroid; abortion; ra
fetal development; kidney damage.
                                                                                                                                                            N-glycosylation site"
                                  N-glycosylation
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CISV	atch bal Similarity 6; Conserva	/note=	sc-difference 1135	ac-differ	sc-difference 1032	C-difference	c-difference 940	sc-difference	difference	difference /	/n	di fi	difference	<u>.</u>	c-difference 683	c-difference 656 /not	c-difference 6	c-difference 5	sc-difference 558	sc-		sc-diffe	sc-difference 4	c-difference 4	Misc-difference 402
CISVPLVPC	atch 73.1%; cal Similarity 66.7%; 6; Conservative (	/note= "the	note= "the Gly gly	note "the Gly	/note= "the Gly	C-difference 982	c-difference 948  Cly  Cly	sc-difference 771 /note= "the Gly	-difference 763 /note= "the Gly	note= "the /32"	/note= "the Gly	/note= "the Gly	/note= "the Gly	/note= "the Gly difference 685	c-difference 683	c-difference 656 Gly	c-difference 640 Gly	c-difference 567 "the	Gly sc-difference 558 /note= "the	sc-difference 535 /note= "the	/note= "the Gly	/note= "the Gly sc-difference 513	sc-difference 496	c-difference 488	402 /note= "t
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CISVPLVPC	itch 73.1%; Score 38; DB 20; Sal Similarity 66.7%; Pred. No. 1.3e+03; 6; Conservative 0; Mismatches 3	/note= "the	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note "the His residue at Gly residue in the	C-difference 982 C-difference 982	C-difference 946 /note= "the His residue at Gly residue in the	sc-difference 771  /note= "the His residue at Gly residue in the	difference 763 /note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note= "the H1s residue at G1y residue in the	Gly residue in the c-difference 683	c-difference 656 /note= "the His residue at	c-difference 640  /note= "the His residue at	c-difference 567  /note= "the His residue in the	sc-difference 558  /note= "the Hig residue at	sc-difference 535 /note= "the His residue at	/note= "the His residue at Gly residue in the	<pre>/note= "the His residue at</pre>	sc-difference 496	c-difference 488	402 /note= "t
CISVPLVPC	itch 73.1%; Score 38; DB 20; Sal Similarity 66.7%; Pred. No. 1.3e+03; 6; Conservative 0; Mismatches 3	/note= "the	/note= "the His residue at this position Gly residue in the formal Seq ID	/note= "the His residue at this position Gly residue in the formal Seq ID	/note= "the His residue at this position Gly residue in the formal Seq ID	C-difference 982  C-difference 982  C-difference 982	C-difference 946  /note= "the His residue at this position  Gly residue in the formal Seq ID	sc-difference 771  /note= "the His residue at this position Gly residue in the formal Seq ID	difference 763  /note= "the His residue at this position"  Gly residue in the formal Seq ID	Ourite relice /32 /note= "the His residue at this position Gly residue in the formal Seq ID	/note- "the His residue at this position Gly residue in the formal Seq ID	/note= "the His residue at this position Gly residue in the formal Seq ID	/note- "the His residue at this position Gly residue in the formal Seq ID	/note= "the His residue at this position Gly residue in the formal Seq ID difference 685	Gly residue in the formal Seq ID	Gly residue in the formal Seq ID c-difference 656  /note= "the His residue at this position"	c-difference 640  Character Tesidue in the formal Seq ID  Character Tesidue at this mosition	c-difference 567	sc-difference 558  Character The His residue in the formal Seq ID	sc-difference 535 /note= "the His residue at this position	/note= "the His residue at this position Gly residue in the formal Seq ID	/note= "the His residue at this position Gly residue in the formal Seq ID sc-difference 513	sc-difference 496	c-difference 488	402  Anotes The His residue at this position
CISVPLVPC	itch 73.1%; Score 38; DB 20; Le sal Similarity 66.7%; Pred. No. 1.3e+03; 6; Conservative 0; Mismatches 3;	/note= "the I	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note "the His residue at Gly residue in the	C-difference 982 C-difference 982	C-difference 946 /note= "the His residue at Gly residue in the	sc-difference 771  /note= "the His residue at this position Gly residue in the formal Seq ID	difference 763  /note= "the His residue at this position"  Gly residue in the formal Seq ID	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	/note= "the His residue at Gly residue in the	note= "the H1s residue at this po Gly residue in the formal difference 685	Gly residue in the formal Seq ID listing"	Gly residue in the formal Seq ID c-difference 656  /note= "the His residue at this position"	c-difference 640  Charles "the His residue at this position is given by the control of the contr	c-difference 567 "the Uis residue at this position is given confidence to the control of the confidence to the confidenc	sc-difference 558  (I) residue in the formal Seg ID listing sc-difference 558	sc-difference 535 /note= "the His residue at this position	/note= "the His residue at Gly residue in the	<pre>/note= "the His residue at this po Gly residue in the formal sc-difference 513</pre>	sc-difference 496	c-difference 488	402  Anotes The His residue at this position

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Misc-difference 358

Misc-difference 353

Misc-difference 274

Misc-difference 241

Misc-difference 235

Misc-difference 234

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RESULT 14
AAGO0458
ID AAGO04
XX AAGO04
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XX Human;
KW Gene t
XX Epl033
XX Epl03
RESULT 1
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Matches 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New nucleic acid that is a 5' expressed sequence obtaining cDNAs and genomic DNAs that correspond diagnostic, forensic, gene therapy and chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-SEP-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human secreted protein, SEQ ID NO: 4539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-OCT-2000
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                                 21-JUN-1999
                                                                                          AAY12860;
                                                                                                                                                AAY12860 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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cisvclcpc 13
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                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 77.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAC00464.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID 4539; 71pp + CD-ROM; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0122487.
                                                                                                                                                Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                    71.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene therapy and chromosome mapping procedures
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                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                         Score 37; DB Pred. No. 35; 0; Mismatches
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Best
                                        Query Match
                                                                                                                                                         sequences can be used for producing secreted human gene products. They can also be used to develop products for diagnosis and therapy. The proteins obtained may have cytokine activity, cell proliferation/differentiation activity, haematopoiesis regulating activity, tissue growth regulating activity, reproductive hormone regulating activity, chemotactic/chemokinetic activity, haemastatic and thrombolytic activity, receptor/ ligand activity, anti-inflammatory activity, tumour inhibition activity or other activities. The products can be used in forensic, gene therapy and chromosome mapping procedures. The sequences can also be used for obtaining corresponding promoter sequences. The nucleic acids encoding the signal peptide can be used for directing extracellular secretion of a polypeptide or the insertion of a directing extracellular secretion of a polypeptide or the insertion of a
                                                                                                                                                                                                                                                                                                                                                                                                     human secreted proteins, and encode the proteins given in AAY12681 to AAY12913, respectively. The proteins given represent the signal peptide and an N-terminal fragment of a secreted protein. The nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; secreted protein; EST; expressed sequence tag; diagnosis; forensic; gene therapy; chromosome mapping; signal peptide; upstream regulatory sequence; cytokine activity; cell proliferation; differentiation; haematopoiesis regulation; tissue growth regulation; reproductive hormone regulation; chemotactic; chemokinetic; haemostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX51459 to AAX51691 represent 5' expressed sequence tags (ESTs) for human secreted proteins, and encode the proteins given in AAX12681 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-153779/13.
N-PSDB; AAX51638.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 34; Page 489; 522pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New nucleic acids encoding human secreted proteins - obtained from cDNA libraries derived from testis, ovary, uterus and spleen tissu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Duclert A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-AUG-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             thrombolytic;
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                                                                                                     Sequence
                                                                                                                                           polypeptide into a membrane, or importing a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GEST ) GENSET
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Local Similarity nes 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST secreted protein SEQ ID NO:450
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                                                                                                       AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             anti-inflammatory; tumour inhibition
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                     71.2%;
                     Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lacroix
                36;
                                          20;
                                                                                                                                        polypeptide into a cell.
                                        Length 65;
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